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THE PORT OF CLEVELAND, OHIO

U. S. ARMY
CORPS OF ENGINEERS

PORT SERIES NO. 43
REVISED 1989

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U. S. ARMY
CORPS OF ENGINEERS

PORT SERIES NO. 43
REVISED 1989

THE PORT OF

CLEVELAND, OHIO

PREPARED BY
THE WATER RESOURCES SUPPORT CENTER

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INTRODUCTION

This report on the Port of Cleveland, Ohio, is published as No. 43 of the Port Series. It supersedes a similar report revised in 1981.

The reports in the Port Series cover the principal United States coastal, Great Lakes, and inland ports, and are compiled and published by the Port Facilities Branch, Water Resources Support Center, U.S. Army Corps of Engineers, under authority of Section 7 of the River and Harbor Act of July 19, 1918, Section 500 of the Transportation Act of February 28, 1920, and Section 8 of the Merchant Marine Act of 1920.

Acknowledgment is made of the valuable assistance given by the Commander, U. S. Army Engineer District, Buffalo, New York; the Cleveland Project Office, Corps of Engineers; facility operators; port organizations; shipping and transportation companies; and city officials in the work of compiling data for this report.

Unless otherwise stated, the information contained in this report was current upon completion of field survey in August 1988. Additional revised data have been included through July 1989.

All data for this report was collected and processed by personnel of the Port Facilities Branch, Water Resources Support Center. We invite user comments to help us maintain an accurate and current port data file inasmuch as there is an average seven years interval between revisions. Please report any errors, additions, deletions, and changes directly to Water Resources Support Center, Port Facilities Branch, Casey Building, Fort Belvoir, Virginia 22060-5586, telephone number (202)355-2495.

METRIC CONVERSION TABLE

Section 3 of Public Law 94-163, the Metric Conversion Act of 1975, declares that the policy of the United States shall be to coordinate and plan the increasing use of the metric system in the United States.

As an initial step, in accordance with the Metric Conversion Act of 1975, this Metric Conversion Table is included in this Port Series Report.

MULTIPLY	BY	TO OBTAIN
Inches	2.54001	Centimeters
Feet	0.304801	Meters
Miles, statute	1.60935	Kilometers
Square Feet	0.0929034	Square meters
Acres	0.404687	Hectares
Pounds per square foot	4.88241	Kilograms per square meter
Tons, short	0.907185	Metric tons
Tons, long	1.01605	Metric tons
Gallons	3.78543	Liters
Degrees, Fahrenheit	5/9 (F-32)	Degrees, Celsius
Barrels, oil	1.58988	Hectoliters
Bushels	0.0352391	Cubic meters

PORT OF CLEVELAND, OHIO

PORT AND HARBOR CONDITIONS

LOCATION AND GENERAL DESCRIPTION

Cleveland, Ohio, is on the south shore of Lake Erie, at the mouth of the Cuyahoga River, approximately 176 statute miles southwesterly by water from Buffalo, New York, and 96 statute miles easterly by water from Toledo, Ohio. The Port of Cleveland consists of a lakefront, breakwater-protected, outer harbor area, and an inner harbor, consisting of the lower, deep-draft section of the Cuyahoga River, and connecting Old River.

The Outer Harbor extends along the Cleveland lakefront for a distance of about 5 miles, has a width of about 1,600 to 2,400 feet, covers an area of about 1,300 acres, and is divided into an East and West Basin, formed by the East and West Breakwaters. The West Basin lies west of the Cuyahoga River entrance and is inclosed by the shore arm of the West Breakwater. The Outer Harbor has two entrances from Lake Erie: The main one is through a dredged channel between the outer ends of two converging breakwaters (East and West Arrowhead Breakwaters) extending outward from the East and West Basin Breakwaters; the other entrance is at the east end of the East Basin between the breakwater and the shore.

The Inner Harbor includes the improved, lower 5.8 miles of the Cuyahoga River and about one mile of Old River, the former outlet of the Cuyahoga River. The Old River extends westward from a point about 0.4 mile above the mouth of the Cuyahoga River. The mouth of and entrance channel to the Cuyahoga River are in line with the main entrance to the Outer Harbor from the lake. The entrance channel is protected by 2 parallel piers, 325 feet apart. Widths in the Cuyahoga River vary from 130 to 325 feet, except at the bends and in the existing turning basin, where a width of 800 feet is available; the turning basin is located 4.8 miles above the mouth.

HARBOR AND CHANNEL IMPROVEMENTS BY THE UNITED STATES

The existing project, authorized by the River and Harbor Act of 3 March 1875, modified by subsequent acts of which the latest are dated 23 October 1962, and 6 December 1966, and the Water Resources Development Act of 1976, provides for:

a. A breakwater-protected, outer harbor area of about 1,300 acres, 5 miles long, and 1,600 to 2,400 feet wide, inclosed by a breakwater system comprising an East Breakwater 20,970 feet long, with a pierhead at its

easterly end, of which 3,300 feet are of timber-crib substructure with stone superstructure, and 17,970 feet of rubblemound construction; a West Breakwater connected with the shore 6,048 feet long, of timber cribs with concrete superstructure with a gap of 201 feet about 662 feet from the shore end; and East and West Arrowhead Breakwaters, each 1,250 feet long.

b. A rubblemound spur breakwater 400 feet long to protect the gap in the West Breakwater shore arm.

c. A 29-foot depth in the lake approach channel to the main entrance, flaring from deep water in the lake to a clear channel width of 600 feet between the outer ends of the Arrowhead Breakwaters, then continuing between the Arrowhead Breakwaters for 1,250 feet to a width of 750 feet between the opening of the main breakwaters.

d. An entrance channel 28 feet deep from the inner end of the lake approach through the outer harbor to the lakeward ends of the piers at the mouth of the Cuyahoga River, varying from 750 to 220 feet in width.

e. A depth of 28 feet in the West Basin over an area bounded by project limits of 100 feet from the West Breakwater, and on the landward side generally by a line 75 feet lakeward of and parallel to the harbor line.

f. The outer harbor basin easterly of the entrance channel to varying depths as follows: a depth of 28 feet easterly of the entrance channel for about 800 feet to a line drawn perpendicular to the east main breakwater; easterly from this perpendicular line a 27-foot deep area extending easterly 3,800 feet bounded by project limits of 380 feet from the east breakwater and on the landward side generally by a line 75 feet lakeward of and parallel to the harbor line.

g. Easterly of this area, a channel with a depth of 25 feet, generally 500 feet wide about 14,600 feet long, parallel to and 380 feet from the east breakwater.

h. A dock approach channel to the former Nicholson Cleveland Terminal Company pier, at the easterly end of the east basin, 25 feet deep from the 25-foot depth contour to a limit 75 feet north of the pierhead line, 400 feet wide at the shoreward end and flared toward the lake.

i. Two parallel, stone-filled, timber crib piers with concrete superstructure, 325 feet apart at the mouth of Cuyahoga River, the east pier 1,602 feet long, and the west pier 1,440 feet long.

j. A depth of 27 feet in the lower Cuyahoga River from the lakeward ends of the piers to immediately above the junction with Old River.

k. Improvement of the channel in the remainder of Cuyahoga River to the vicinity of mile 5.8 to a depth of 23 feet, suitably widened at bends, with a turning basin in Cuyahoga River to a depth of 18 feet in the vicinity of mile 4.8.

l. Improvement of the channel in Old River to 27-foot depth with suitable widening at bends.

m. Replacement of 7 railroad bridges over Cuyahoga River, and replacement of one railroad bridge and one highway bridge over Old River.

The project as modified by the 1976 Water Resources Development Act authorized preparation of a Reformulation Phase I Design Memorandum which was completed in July 1984. The report, currently under review, recommended enlarging and deepening to 31 feet LWD the east entrance channel, deepening the east basin channel to 27 feet LWD and expanding the capacity of Dike Site 14 to contain polluted dredged material resulting from the project.

The existing project is 90% complete exclusive of inactive and deferred portions of the project. Work remaining to complete project consists of the following:

Enlarging and deepening the east entrance channel to 31 feet LWD, deepening the east basin to 27 feet LWD, and expanding the capacity of Dike Site 14 to contain polluted dredged material resulting from the project if and when authorized for construction.

As of 30 September 1988, the controlling depths in various sections of Cleveland Harbor were:

29 feet in the Lake Approach.
28 feet in the Entrance Channel.
28 feet in the West Basin.
28 feet and 27 feet in harbor areas of the East Basin.
25 feet in the 500-foot wide channel in the remaining portion of the East Basin, including dock approach channel at the easterly end of basin.
27 feet in the Cuyahoga River channel between the piers to Bridge No. 1.
23 feet in Cuyahoga River.
23 feet in Old River to Sand Products Corporation dock.
18 feet in turning basin in Cuyahoga River.

All depths are referred to low water datum for Lake Erie, elevation 568.6 feet above mean water level at Father Point, Quebec (International Great Lakes Datum 1955).

Ordinary fluctuations of water level in Lake Erie are from 3.5 feet above to 0.5 foot below low water datum, and extreme, instantaneous fluctuations due to wind and other causes have ranged from 4.5 feet above to 1.0 foot below that plane.

ANCHORAGES

Federally designated anchorage areas established for Cleveland Harbor are described in the following paragraphs:

(1) West Anchorage. The northwesterly portion of the West Basin between the northwest limits of the West Basin and a line parallel to and 1,050 feet distant from the West Breakwater; and from the southwest limits of the West Basin to a line perpendicular to the West Breakwater, 2,050 feet southwesterly along the West Breakwater from Cleveland West Breakwater Light.

(2) East Anchorage. The southeasterly portion of the East Basin between the mainland and a line parallel to and 1,250 feet distant from the East Breakwater; from opposite Cleveland East Entrance Light to a line approximately on meridian 81°40'34".

(3) Explosives Anchorage. In Lake Erie, northwest of Cleveland Harbor East Breakwater, and including a rectangular area marked by 4 white spar buoys at the following true bearings and distances from Cleveland East Pierhead Light: 38°30', 2,050 feet; 68°, 2,050 feet; 57°, 7,050 feet; and 49°, 7,050 feet. Use of the explosives anchorage is subject to the supervision of the Captain of the Port, U.S. Coast Guard.

The West and East Anchorages are general anchorages.

BRIDGES

Within the port area, 22 bridges and viaducts cross the navigable section of the Cuyahoga River, and 2 cross the Old River. These bridges are described in the table on the following page.

LIST OF BRIDGES

MILES ABOVE MOUTH	DESIGNATION	TYPE	MINIMUM CLEARANCE (FEET) WIDTH(1)	HEIGHT ABOVE LWD OPEN	HEIGHT ABOVE LWD CLOSED	REMARKS
	CUYAHOGA RIVER					
0.76	Consolidated Rail Corp.....	Vertical lift.	250	98.6	8.6	-
1.01	Main Avenue Viaduct.....	Fixed.	218	-	97.7(2)	-
1.28	CSX Transportation (railroad)	Bascule.	229	-	8.7	Single leaf.
1.39	Center Street.....	Swing.	113	-	17.7	-
1.42	Detroit-Superior Viaduct.....	Fixed.	113	-	98.0	Highway.
1.89	Union Terminal Viaduct.....	Fixed.	200	-	98.2	Railroad.
1.93	Columbus Road.....	Vertical lift.	220	98.4	17.6	-
2.24	Consolidated Rail Corp. (British Street).....	Vertical lift.	200	97.7	8.4	-
2.42	Consolidated Rail Corp. (Carter Road).....	Vertical lift.	200	98.8	23.5	-
2.43	Carter Road.....	Vertical lift.	201	97.3	22.6	-
2.80	Eagle Avenue.....	Vertical lift.	187	97.5	15.6	-
3.14	Lorain-Carnegie Viaduct.....	Fixed.	178	-	96.4(3)	Highway.
3.19	Consolidated Rail Corp. (Lorain-Carnegie).....	Bascule.	134	-	20.8	Single leaf.
3.34	Norfolk and Western Railway..	Vertical lift.	200	97.7	64.2	-
3.42	Inner Belt Freeway.....	Fixed.	230	-	97.0(4)	-
3.69	West 3d Street.....	Vertical lift.	200	97.3	10.5	-
4.33	Consolidated Rail Corp. (Erie-Lackawanna).....	Bascule.	117	-	29.3	Single leaf.
4.51	Jefferson Avenue.....	-	100	-	-	Superstructure removed.
4.71	Newburgh and South Shore Railway.....	Bascule.	110	-	11.1	-
4.75	CSX Transportation (railroad)	Bascule.	110	-	10.3	-
5.35	Republic Steel Corp.....	Fixed.	210	-	99.0	Conveyor and pipeline.
5.42	River Terminal Railroad.....	Bascule.	129	-	15.5	-
5.47	Norfolk and Western Railway..	Vertical lift.	200	97.7	28.9	Single leaf.
	OLD RIVER					
1.75	CSX Transportation (railroad)	Bascule.	170	-	6.9	Single leaf.
1.89	Willow Avenue.....	Vertical lift.	150	12.6	98.0	-

(1) Normal to channel.
(2) Center 165 feet.
(3) Center 140 feet.
(4) Center 199 feet.

WEATHER CONDITIONS

Cleveland's climate is continental in character but with strong modifying influences caused by Lake Erie. West to northerly winds blowing off Lake Erie lower daily temperatures in summer and raise temperatures in winter. Temperatures 5 miles south of the lakeshore average from 2 to 4° higher in summer, while overnight low temperatures average from 2 to 4° lower during all seasons. When winds are from directions other than west to northerly, the lake has little effect upon temperatures.

Summers are moderately warm and humid with occasional days when temperatures exceed 90°F; winters are reasonably cold and cloudy with an average of five days with sub-zero temperatures. Weather changes occur every few days from the passing of cold or warm fronts and their associated centers of high and low pressures.

The daily range in temperature is usually greatest in late summer and least in winter. Annual extremes in temperature normally occur soon after June 21 and December 22. Temperatures of 100° or higher are rare. On the average, freezing temperatures in fall are first recorded in October while the last freezing temperature in spring normally occurs in April.

Precipitation varies widely from year to year; however, it is normally abundant and well distributed throughout the year with spring being the wettest season. Showers and thundershowers account for most of the rainfall during the growing season. Thunderstorms, often accompanied by damaging winds of 50 mph or greater, are most frequent from April through August. Snowfall may fluctuate widely. Mean annual snowfall increases from west to east in Cuyahoga County ranging from about 45 inches in the west to more than 90 inches in the extreme east.

The average earliest and latest dates of opening and closing of navigation are as follows:

	Opening	Closing
Earliest date.....	March 21	December 20
Latest date.....	April 8	December 30

The information on the following page was compiled by the National Weather Station at Cleveland Hopkins International Airport, Brook Park, Ohio, and published by the Environmental Satellite, Data and Information Service, National Oceanic and Atmospheric Administration, U. S. Department of Commerce.

METEOROLOGICAL DATA FOR PERIOD OF RECORD

TIME	NORMAL DAILY TEMPERATURE F°		NORMAL TOTAL PRECIPITATION (INCHES)	PREVAILING DIRECTION OF WINDS	HEAVY FOG* (DAYS)
	MAXIMUM	MINIMUM			
No. of years	29	29	29	10	46
January.....	32.5	18.5	2.47	SW	1.4
February.....	34.8	19.9	2.20	S	1.7
March.....	44.8	28.4	2.99	W	1.8
April.....	57.9	38.3	3.32	S	1.2
May.....	68.5	47.9	3.30	S	1.3
June.....	78.0	57.2	3.49	S	0.7
July.....	81.7	61.4	3.37	S	0.5
August.....	80.3	60.5	3.38	S	0.9
September....	74.2	54.0	2.92	S	0.6
October.....	62.7	43.6	2.45	S	0.9
November.....	49.3	34.3	2.76	S	0.6
December.....	37.5	24.6	2.75	S	1.1
Year	58.5	40.7	35.40	S	12.7

* Visibility 1/4 mile or less.

U.S. Coast Guard Cleveland Harbor Station Dock
(P.W.D. Ref. No. 1)

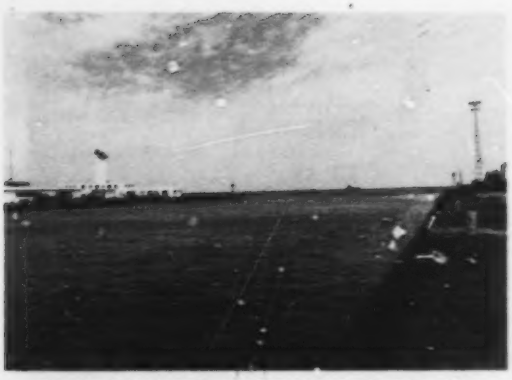
Corps of Engineers Cleveland Project Office
(P.W.D. Ref. No. 2)

Cleveland-Cuyahoga County Port Authority Stadium Wharf
Berth 32 East, operated by the Port Authority
and CERES Terminal Co., Inc.
(P.W.D. Ref. No. 4)

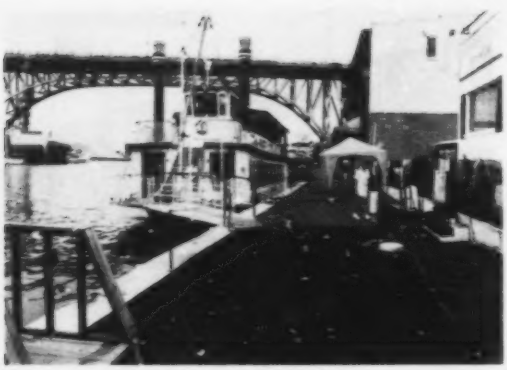
Cleveland-Cuyahoga County Port Authority Stadium Wharf
Berths 28, 30, and 32 North
(P.W.D. Ref. No. 5)

Cleveland-Cuyahoga County Port Authority Stadium Wharf
Berth 28 West
(P.W.D. Ref. No. 6)

Cleveland-Cuyahoga County Port Authority Pier No. 24
operated by Cleveland Stevedore Co.
(P.W.D. Ref. No. 8)



Cleveland-Cuyahoga County Port Authority Dock No. 20
(P.W.D. Ref. No. 9)



North Coast Cruises Landing
(P.W.D. Ref. No. 11)

Cereal Food Processors Dock
(P.W.D. Ref. No. 13)

Medusa Cement Co., Cleveland Dock
(P.W.D. Ref. No. 14)

Columbus Road Dock
(P.W.D. Ref. No. 15)

G & W Industries, Collision Bend Mooring Dock
(P.W.D. Ref. No. 16)

Mid-Continent Coal & Coke Co. Dock
(P.W.D. Ref. No. 17)

River Dock, Inc., Dock
(P.W.D. Ref. No. 18)

Cleveland Builders Supply Co., Dock No. 2
(P.W.D. Ref. No. 19)

Ontario Stone Corp., Dock No. 2
(P.W.D. Ref. No. 20)

Marathon Petroleum Co., Cleveland
Asphalt Terminal Barge Wharf
(P.W.D. Ref. No. 21)

Zalcon Plant Dock
(P.W.D. Ref. No. 23)

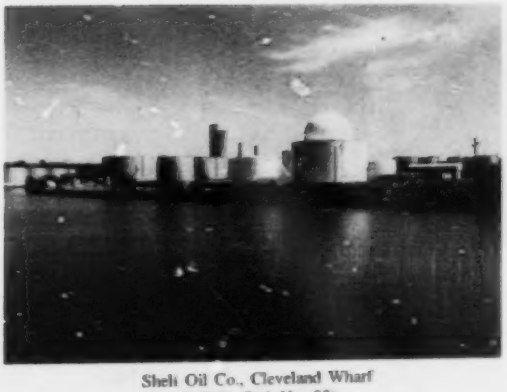
LTV Steel Corp., Fuel Oil Dock
(P.W.D. Ref. No. 25)

LTV Steel Corp., East Side, Upper Dock
(P.W.D. Ref. No. 26)

LTV Steel Corp., West Side, Middle Dock
(P.W.D. Ref. No. 27)

C-I-L Chemicals Wharf
(P.W.D. Ref. No. 29)

Koppers Co., Cleveland Wharf
(P.W.D. Ref. No. 30)



Sheli Oil Co., Cleveland Wharf
(P.W.D. Ref. No. 35)

Fleet Supply Dock
(P.W.D. Ref. No. 34)

City of Cleveland, Eagle Avenue Fireboat Wharf
(P.W.D. Ref. No. 38)

G & W Industries Wharf
(P.W.D. Ref. No. 39)

United Ready Mix Dock
(P.W.D. Ref. No. 41)

Lafarge Cement Corp., Great Lakes Region
Cleveland Terminal Wharf
(P.W.D. Ref. No. 42)

Ontario Stone Corp., Dock No. 4
(P.W.D. Ref. No. 43)

Great Lakes Towing Co., Shipyard Wharf
(P.W.D. Ref. No. 44)

Dunbar and Sullivan Dredging Co. Slip
(P.W.D. Ref. No. 45)

Sand Products Corp., Dock No. 1
(P.W.D. Ref. No. 47)

Ontario Stone Corp., Dock No. 1
(P.W.D. Ref. No. 49)

Great Lakes Dredge and Dock Co.,
Whiskey Island Yard Dock
(P.W.D. Ref. No. 50)

Consolidated Rail Corp., Ore Dock No. 11
(P.W.D. Ref. No. 51)

Aerial View of Port of Cleveland and the Cuyahoga River

PORT OF CLEVELAND, OHIO

PORT AND HARBOR FACILITIES

PIERS, WHARVES, AND DOCKS

Fifty-one piers, wharves, and docks are described in this report for the Port of Cleveland. Eleven are located in the East and West Basins of the Outer Harbor; 7 along the banks of the Old River; and 17 and 16 along the right and left banks of the Cuyahoga River, respectively.

Each facility is described under a reference number in the table of Piers, Wharves, and Docks beginning on page 18. These reference numbers designate facility locations on the accompanying Port Facilities Map.

The table on the following pages summarizes the functional uses of the various piers, wharves, and docks at Cleveland. Many of these wharves are used for multiple purposes as indicated in the table; each can be identified by its respective P.W.D. reference number.

The numerous waterfront facilities in the port area used exclusively by recreational craft, and generally those docking facilities providing nonmaritime use are not necessarily included in this report. Non-active docking facilities in good physical condition are included.

The Cleveland-Cuyahoga County Port Authority administers the facilities engaged in handling general cargo in the port. A summary is given below.

P.W.D. REF. NO.	OPERATOR	BERTHING SPACE (FEET)	DEPTH ALONGSIDE AT LWD (FEET)	TRANSIT SHEDS	
				NO.	CARGO SPACE (FEET)
	Cleveland-Cuyahoga County Port Authority				
5	Berths 28, 30 and 32 North	1,608	27-30	2	117,750
6	Berth 28 West.....	710	26-28	-	-
4	Cleveland-Cuyahoga County Port Authority and CERES Terminal Co., Inc., Berth 32 East....	712	27	-	-
	Cleveland Stevedore Co.				
7	Pier No. 26.....	297;698;681	25-36	1	84,500
8	Pier No. 24.....	519;672;642	27	1	57,100
	TOTALS.....	--	--	4	259,350

PURPOSE FOR WHICH USED

LOCATION	LAKEFRONT, EAST BASIN											RIGHT BANK, CUYAHOGA RIVER														
P.W.D. REFERENCE NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Cargo handling:																										
General cargo:																										
Containerized and conventional....				•	•	•	•	•																		
Heavy lift items..						•																				
Asphalt.....																					•					
Aluminum pigs.....				•	•	•																				
Bauxite/fluorspar...								•																		
Bulk (dry misc.)....									•										•							
Cement.....														•												
Coke breeze.....																	•									
Fuel oil.....																					•				•	
Iron ore pellets....																										•
Limestone.....																		•	•	•						
Newsprint.....								•																		
Petroleum products..																					•					
Sand.....																			•							
Steel/steel products				•	•	•		•																		
Wheat.....													•													
Handling supplies and equipment.....		•										•														
Mooring:																										
Company-owned equipment.....										•																
Excursion vessels...											•															
Pollution control boat.....												•														
Government equipment	•	•																								
Miscellaneous.....																•										•
Not operated or used...															•							•		•		
Not used for handling waterborne commerce..			•																				•			

PURPOSE FOR WHICH USED

LOCATION	LEFT BANK, CUYAHOGA RIVER															A			WHISKEY ISLAND					B	
P.W.D. REFERENCE NUMBER	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Cargo handling:																									
Bulk cargo (dry)											•						•					•	•		
Cement																•									
Ferrous scrap	•																								
Fuel oil	•																								
Iron ore																									•
Iron ore pellets	•	•									•														•
Limestone	•	•															•					•	•		
Petroleum products								•																	
Salt																				•					
Sand					•		•			•											•				
Steel/steel products	•	•																							
Stone					•		•								•										
Sulfuric acid			•																						
Marine repair/													•	•				•							
Drydocking																		•							
Handling supplies																			•					•	
Mooring:																									
Company-owned equipment													•					•	•					•	
Fire boats												•													
Pollution control boat									•																
Miscellaneous		•																							
Not operated or used				•		•																			

A - RIGHT BANK, OLD RIVER B - LAKEFRONT, WEST BASIN

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. -	72073 Dock Code No. -	72073 Dock Code No. 736
REFERENCE NUMBER ON MAP NO.	1	2	3
NAME	U.S. Coast Guard Cleveland Harbor Station Dock.	Corps of Engineers Cleveland Project Office Dock.	City of Cleveland, East 9th Street Municipal Pier.
LOCATION ON WATERFRONT	Lakefront, East Basin, approximately 600 feet east of foot of East 9th Street. 1055 East 9th Street.	Lakefront, East Basin, approximately 500 feet east of foot of East 9th Street. Foot of East 9th Street	Lakefront, East Basin, foot of East 9th Street. Foot of East 9th Street
OWNED BY	U.S. Government.	United States Government.	City of Cleveland.
OPERATED BY	U.S. Government.	U. S. Army Corps of Engineers.	City of Cleveland.
PURPOSE FOR WHICH USED	Mooring U.S. Coast Guard vessels.	Mooring Corps of Engineers floating equipment; handling supplies and equipment for dredges and derrick boats.	Not used for handling waterborne commerce.
TYPE OF CONSTRUCTION	Concrete-capped, steel sheet pile bulkhead with asphalt-surfaced solid fill. Row of six timber mooring dolphins in line with face.	L-shaped pier formed by steel sheet pile retaining walls with asphalt-surfaced solid fill, extending from steel sheet pile bulkhead with asphalt-surfaced solid fill.	Pier formed by concrete retaining walls with solid fill; part brick, part asphalt, and part concrete-surfaced. Concrete steps extend downward from outer end of pier to an 18-foot wide concrete boat landing along face.

DESCRIPTION		Face	Pier	Pier approach	Bulkheads North	Bulkheads East	Face	East Side	West Side
Dimensions	(Feet)	290+275+35	427x60	240x27	238	230	99	710	714
Depth Alongside at LWD	Do.	9-15	14-17	12-17	12-15	12-15	18	6-18	6-18
Breasting Distance	Do.	290+275	427&400	140&300	238	230	99	710	714
Total Berthing Space	Do.	565	427&400	149&300	238	230	99	710	714
Width of Apron	Do.	Open.	Open.	Open.	55	Open.	18	10 & open.	10 & open.
Height of Deck at LWD	Do.	8	9.3				8		
Load Capacity (Lbs. per Sq. Ft.)		-	-				-		
Lighted or Unlighted		Lighted.	Lighted.				Lighted.		
MECHANICAL HANDLING FACILITIES		None.	One 5-ton, gasoline, mobile hoist with 20-foot telescopic boom.				None.		
RAILWAY CONNECTIONS		None.	None.				None.		
HIGHWAY CONNECTIONS		Via East 9th Street, asphalt, 70 feet wide.	Via East 9th Street, asphalt, 70 feet wide.				Via East 9th Street, asphalt, 70 feet wide.		
WATER SUPPLY	(For Vessels)	Through one 2 1/2-inch line with 1 1/2 and 3/4-inch hose connections.	Through one 2 1/2-inch line with 1 1/2-inch hose connections.				None.		
ELECTRIC CURRENT	(For Vessels)	A.C., 110/208/440 volts.	A.C. 120/240/440 volts.				None.		
FIRE PROTECTION (Other Than City)		Water lines, hydrants, hose, and hand extinguishers.	Water lines, hydrants, hose, hand extinguishers, and security patrol.				Hand extinguishers.		
REMARKS		One 4-inch sewage pipeline serves wharf. Coast Guard Cleveland Harbor Station and Office of Captain of the Port located in rear. Open area at rear of bulkhead serves as parking lot.	North bulkhead is in line with north side of approach to pier providing for 478 feet of continuous berthing. A row of 6 timber mooring dolphins extends 300 feet eastward from east bulkhead. Corps of Engineers Cleveland project office located in building at rear. A steep 13 by 18-foot launching ramp and a 25- by 55-foot boat slip are built into the east bulkhead.				A one-story building (approximately 135 by 45 feet) on outer portion of pier is occupied by Captain Frank's Restaurant. Pier is used mainly for recreational fishing. The Goodtime Cruise Line, operated by Goodtime Transit, Inc., operates harbor excursion boats from east side of pier during the summer season.		

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 732	72073 Dock Code No. 730	72073 Dock Code No. 728
REFERENCE NUMBER ON MAP NO.	4	5	6
NAME	Cleveland-Cuyahoga County Port Authority, Stadium Wharf, Berth 32 East.	Cleveland-Cuyahoga County Port Authority, Stadium Wharf, Berths 28, 30, and 32 North.	Cleveland-Cuyahoga County Port Authority, Stadium Wharf, Berth 28 West.
LOCATION ON WATERFRONT	Lakefront, East Basin, approximately 800 feet west of foot of East 9th Street. 101 Erieside Ave	Lakefront, East Basin, approximately 0.6 miles east of East Pier Light at entrance to Cuyahoga River. 101 Erieside Ave.	Lakefront, East Basin, foot of west 3d Street extended. 101 Erieside Ave.
OWNED BY	City of Cleveland.	City of Cleveland.	City of Cleveland.
OPERATED BY	Cleveland-Cuyahoga County Port Authority & CERES Terminal Co., Inc.	Cleveland-Cuyahoga County Port Authority.	Cleveland-Cuyahoga County Port Authority.
PURPOSE FOR WHICH USED	Receipt and shipment of conventional and containerized general cargo in foreign trade; receipt of aluminum pigs; handling steel products.	Receipt and shipment of conventional and containerized general cargo in foreign trade, and steel products; receipt of aluminum pigs.	Receipt and shipment of conventional and containerized general cargo in foreign trade, steel products, and heavy-lift items; receipt of aluminum pigs.
TYPE OF CONSTRUCTION	Concrete retaining walls with asphalt-surfaced solid fill on concrete-relieving platform supported by concrete-filled steel pipe piles; fronted by timber fender system.	Berth 28: 510-foot steel sheet pile bulkhead with asphalt-surfaced solid fill; Berths 30 and 32: 1,098 feet of same construction described under Berth 32 East (Ref. No. 4); all fronted by timber fender system.	Steel sheet pile bulkhead with asphalt-surfaced solid fill; fronted by timber fender system.
DESCRIPTION	Face	Face	Face
Dimensions (Feet)	712	1,608	710
Depth Alongside at LWD Do.	27	27-30	26-28
Breasting Distance Do.	712	1,608	710
Total Berthing Space Do.	712	1,608	710
Width of Apron Do.	Open.	60 and open.	Open.
Height of Deck at LWD Do.	10.4	10.4	10.4
Load Capacity (Lbs. per Sq. Ft.)	-	800, Berth 28; 750 Berths 30 & 32	800
Lighted or Unlighted	Lighted.	Lighted.	Lighted.
TRANSIT SHEDS Number and Description	None.	Two - steel frame, metal, brick, and concrete block walls; asphalt floor.	None.
		Warehouse 32 / Warehouse 30	
Length and Width (Feet)		375&300x180&75 / 300x180	
Height Inside Do.		20.5 / 20.5	
Floor Area for Cargo (Sq. Ft.)		63,750 / 54,000	
Load Capacity (Lbs. per Sq. Ft.)		750 / 750	
Cargo Doors		Each shed: shipside: four, 20 x 16; rear: four, 20 x 16; each end: one, 20 x 18.	
MECHANICAL HANDLING FACILITIES	Three diesel crawler cranes: two 200-ton with 120-foot booms; one 150-ton with 120-foot boom. Buckets or magnets are available as required. Twenty-one 26- to 2 1/2-ton diesel forklift trucks also serve wharf.	Cleveland Stevedore Co.: Seven diesel crawler cranes- one 230-ton with 130-foot boom; three 150-, one 135-, and one 130-ton, each with 120-foot boom and one 65-ton with 100-foot boom. Cranes are equipped with two 4- and two 2 1/2-cubic yard buckets and two 63-inch electric magnets. Forty-two 2- to 31-ton diesel and gasoline fork lift trucks and two 2 1/2-cubic yard, diesel front-end loaders also serve the public facilities.	Use of stevedoring equipment described under Ref. No. 5. Cleveland-Cuyahoga County Port Authority: One electric, stiff-leg derrick mounted on an elevated steel structure with 85-foot boom on a bull wheel; maximum lift capacity 150 tons at 65-foot radius (outboard reach, 41 feet), boom swings 110 degrees.
RAILWAY CONNECTIONS	Two surface tracks join with trackage of Ref. No. 5; connect with Consolidated Rail Corp.	Two surface tracks join with trackage of Ref. No. 6; 2 platform-level tracks along rear of transit sheds connect with Consolidated Rail Corp.	Two surface tracks join with trackage of Ref. No. 7; connect with Consolidated Rail Corp.
HIGHWAY CONNECTIONS	Via terminal entrance on Erieside Ave., asphalt, 50 and 70 feet wide, from East 9th and West 3d Streets.	Via Erieside Avenue, asphalt, 36 feet wide, from West 3d and West 9th Streets.	Via Erieside Avenue, asphalt, 36 feet wide, from West 3d and West 9th Streets.
WATER SUPPLY (For Vessels)	Through one 8-inch line with 2 1/2-inch hose connections.	Through one 8-inch line with 2 1/2-inch hose connections.	Through one 8-inch line with 2 1/2-inch hose connections.
ELECTRIC CURRENT (For Vessels)	A.C.,120/240/480 volts.	A.C., 110 volts.	A.C., 110 volts.
FIRE PROTECTION (Other Than City)	Hydrants and security patrol.	Sprinkler systems in transit sheds, hand extinguishers, hydrants, and security patrol.	Hydrants and security patrol.
REMARKS	-	Transit sheds are also used as storage warehouses. Approximately 10 acres of paved, open storage area located on wharf and at rear of transit sheds; additional open storage area available during closed navigation season.	Wharf forms slip 230 feet wide with east side of Ref. No. 7.

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 726			72073 Dock Code No. 724			72073 Dock Code No. -
REFERENCE NUMBER ON MAP NO.	7			8			9
NAME	Cleveland-Cuyahoga County Port Authority, Pier No. 26.			Cleveland-Cuyahoga County Port Authority, Pier No. 24.			Cleveland-Cuyahoga County Port Authority, Dock No. 20.
LOCATION ON WATERFRONT	Lakefront, East Basin, approximately 350 feet west of foot of West 3d Street extended. 101 Erieside Ave.			Lakefront, East Basin, foot of West 9th Street extended. 101 Erieside Ave.			Cuyahoga River, east side of entrance. 101 Erieside Ave.
OWNED BY	City of Cleveland.			City of Cleveland.			Cleveland-Cuyahoga County Port Authority.
OPERATED BY	Cleveland Stevedore Co.			Cleveland Stevedore Co.			Cleveland-Cuyahoga County Port Authority.
PURPOSE FOR WHICH USED	Receipt and shipment of conventional and containerized general cargo in foreign trade.			Receipt and shipment of conventional and containerized general cargo in foreign trade and steel products; receipt of bulk fluorspar and bauxite and occasional receipt of newsprint.			Receipt of miscellaneous bulk materials.
TYPE OF CONSTRUCTION	Pier formed by steel sheet pile retaining walls with asphalt-surfaced solid fill; timber fender system along face and sides.			Pier formed by steel sheet pile retaining walls with asphalt-surfaced solid fill; fronted by rubber loop/rubber bumper fender system.			Steel sheet pile bulkhead with asphalt-surfaced solid fill fronted by timber fender system.
DESCRIPTION	Face	East side	West side	Face	East side	West side	Face
Dimensions (Feet)	297	698	681	519	672	642	775
Depth Alongside at LWD Do.	25-27	25-26	25-26	27	27	27	21-25
Breasting Distance Do.	297	698	681	519	672	642	775
Total Berthing Space Do.	297	698	681	519	672	642	775
Width of Apron Do.	Open.	50 & open.	50 & open.	Open.	80	Open.	80 and open.
Height of Deck at LWD Do.	10.4			10.4			8
Load Capacity (Lbs. per Sq. Ft.)	800			800			1,000
Lighted or Unlighted	Lighted.			Lighted.			Partly lighted.
TRANSIT SHEDS Number and Description	One - steel frame, metal-covered; concrete floor (2 sections).			One - steel frame, metal-covered, part with low concrete walls; concrete floor.			None.
Length and Width (Feet)	600x190&100			402x160+300x addition.			None.
Height Inside Do.	20			22			
Floor Area for Cargo (Sq. Ft.)	84,500			57,100			
Load Capacity (Lbs. per Sq. Ft.)	800			800			
Cargo Doors	East side: four, 12 x 14; two, 25 x 20; outer end: two, 25 x 20; west side: two, 24 x 20; four, 12 x 14; one, 17 x 18; one 30 x 20.			East side: two, 30 x 20; two, 20 x 20; outer end: one, 30 by 20; west side: three, 23 x 24; one 20 x 22; inner end: three, 20 x 20.			
MECHANICAL HANDLING FACILITIES	Use of equipment described under Ref. No. 5.			Use of equipment described under Ref. Nos. 5.			None.
RAILWAY CONNECTIONS	Two surface tracks extend along east and west sides of pier; connect with Consolidated Rail Corp.			Two surface tracks extend along each side of pier connect with Consolidated Rail Corp.			Consolidated Rail Corp. Three surface tracks extend along wharf; additional surface tracks serve open wharf in rear; one extends into interior of shed.
HIGHWAY CONNECTIONS	Via Erieside Avenue, asphalt, 36 feet wide, from West 3d and West 9th Streets.			Via Erieside Avenue, asphalt, 36 feet wide, from West 3d and West 9th Streets.			Via road, asphalt, 20-24 feet wide, from foot of East 9th Street extension, concrete, 40 feet wide.
WATER SUPPLY (For Vessels)	Through one 8-inch line with 2 1/2-inch hose connections.			Through one 8-inch line with 2 1/2-inch hose connections.			None.
ELECTRIC CURRENT (For Vessels)	A.C., 110 volts.			A.C., 110 volts.			A.C., 110 volts.
FIRE PROTECTION (Other Than City)	Automatic detection service, sprinkler systems in transit shed, hydrants, hand extinguishers, and security patrol.			Automatic detection service, sprinkler system in transit shed, hydrants, hand extinguishers, and security patrol.			Hand extinguishers.
REMARKS	Transit shed is also used as a storage warehouse. West side of pier forms slip 220 feet wide with east side of Pier No. 24 (Ref. No. 8). A total of approximately 1.2 acres of open storage area available on pier and at rear of heads of slips on each side.			Transit shed is also used as a storage warehouse. Inner 38- by 32-foot section of east side of transit shed is 2-story, concrete block construction and is used for offices. Approximately 3 acres of asphalt paved open storage area available on pier.			Approximately 9 acres of open storage area located on open wharf with capacity for approximately 240,000 tons of miscellaneous bulk materials.

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. -		72073 Dock Code No. -		72073 Dock Code No. -	
REFERENCE NUMBER ON MAP NO.	10		11		12	
NAME	Samsel Rope and Marine Supply Co., Dock No. 2.		North Coast Cruises Landing.		Samsel Rope & Marine Supply Co., Dock No. 1.	
LOCATION ON WATERFRONT	Right bank, Cuyahoga River, approximately 300 feet above Main Avenue Viaduct. 1285 Old River Road.		Right bank, Cuyahoga River, approximately 400 feet above Main Avenue Viaduct. 1290 Old River Road.		Right bank, Cuyahoga River, approximately 550 feet above Main Avenue Viaduct. 1285 Old River Road.	
OWNED BY	Lois Samsel.		Great Lakes Towing Co.		Samsel Realty Co.	
OPERATED BY	Samsel Rope and Marine Supply Co.		North Coast Cruises Inc.		Samsel Rope & Marine Supply Co. and Pollution Recovery Systems.	
PURPOSE FOR WHICH USED	Mooring company-owned vessels.		Landing for Larbor excursion vessel "Goodtime II."		Handling marine supplies; mooring pollution control/oil spill recovery vessels.	
TYPE OF CONSTRUCTION	Steel plate bulkhead with brick and concrete-surfaced solid fill.		Steel sheet pile bulkhead with asphalt-surfaced solid fill.		Steel sheet pile bulkhead with concrete-surfaced solid fill.	
DESCRIPTION	Face	Sides	Face		Face	
Dimensions (Feet)	134	24	205		160	
Depth Alongside at LWD Do.	10-12	-	13-20		12-13	
Bressting Distance Do.	134	-	205		160	
Total Berthing Space Do.	134	-	205		160	
Width of Apron Do.	24		Open.		38-25	
Height of Deck at LWD Do.	6		6		7	
Load Capacity (Lbs. per Sq. Ft.)	-		-		-	
Lighted or Unlighted	Lighted.		Lighted.		Lighted.	
MECHANICAL HANDLING FACILITIES	None.		None.		None.	
RAILWAY CONNECTIONS	None.		None.		None.	
HIGHWAY CONNECTIONS	Via Old River Road, asphalt, 35 feet wide.		Via Old River Road, asphalt, 35 feet wide.		Via Old River Road, asphalt, 35 feet wide.	
WATER SUPPLY (For Vessels)	Through one 1-inch line with 3/4-inch hose connections.		Through one 2-inch line with 1 1/2-inch hose connections.		Through 3/4-inch hose connections.	
ELECTRIC CURRENT (For Vessels)	A.C.,110/220 volts.		A.C., 110 volts.		A.C., 110/220 volts.	
FIRE PROTECTION (Other Than City)	Hose and hand extinguishers.		Hose and hand extinguishers.		Hand extinguishers.	
REMARKS	Marine supply store located at rear of wharf.		Business office located in building at rear.		-	

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 700	72073 Dock Code No. 673	72073 Dock Code No. -
REFERENCE NUMBER ON MAP NO.	13	14	15
NAME	Cereal Food Processors Dock.	Medusa Cement Co., Cleveland Dock.	City of Cleveland, Columbus Road Dock.
LOCATION ON WATERFRONT	Right bank, Cuyahoga River, approximately 250 feet above Center Street Bridge. 1635 Merwin Street.	Right bank, Cuyahoga River, below Consolidated Rail Corp. bridge at foot of British Street. Columbus Road.	Right bank, Cuyahoga River, above Consolidated Rail Corp. bridge at foot of British Street. Columbus Road.
OWNED BY	Cereal Food Processors, Inc.	Medusa Cement Co., subsidiary of Crane Co.	City of Cleveland.
OPERATED BY	Cereal Food Processors, Inc.	Medusa Cement Co., subsidiary of Crane Co.	Not operated.
PURPOSE FOR WHICH USED	Receipt of wheat by vessel.	Receipt of bulk cement.	Not used.
TYPE OF CONSTRUCTION	Steel sheet pile bulkhead with solid fill; 3- ft wide, metal-grating walkway extends along wharf.	Steel sheet pile bulkhead with solid fill; fronted by timber fender system.	Steel sheet pile bulkhead with solid fill.
DESCRIPTION	Face	Face	Face
Dimensions (Feet)	350	600	410+615
Depth Alongside at LWD Do.	20-23	20-23	13-24
Breasting Distance Do.	350	600	410+615
Total Berthing Space Do.	350	600	410+615
Width of Apron Do.	Open, 10 and 30.	Open.	Open and 30.
Height of Deck at LWD Do.	3-5	5-6	10 and 8.
Load Capacity (Lbs. per Sq. Ft.)	-	-	-
Lighted or Unlighted	Lighted.	Unlighted.	Partly lighted.
MECHANICAL HANDLING FACILITIES	Tower on wharf equipped with an electrically-operated, retractable marine leg, unloading capacity 9,000 bushels per hour.	Self-unloading vessels unload into receiving hopper on wharf which is served by a bucket elevator and air slide conveyor extending to storage silos at rear; rate 1,500 tons per hour.	None.
RAILWAY CONNECTIONS	Two and three surface tracks serving undertrack pit and bulk loading facilities, respectively, at flour mill in rear; connect with Consolidated Rail Corp.	None.	CSX Transportation, Inc.: One platform-level track serves former freight house and 2 surface tracks extend along upper portion of wharf.
HIGHWAY CONNECTIONS	Via Merwin Avenue, asphalt, 42 feet wide from Center Street, asphalt, 40 feet wide.	Via driveway, concrete, 12 feet wide, from Columbus Road, asphalt, 40 feet wide.	Via ramp, from Columbus Road, asphalt, 40 feet wide.
WATER SUPPLY (For Vessels)	Through 2-inch line.	Through one 2-inch line in building.	None.
ELECTRIC CURRENT (For Vessels)	None.	A.C., 110 volts.	None.
FIRE PROTECTION (Other Than City)	Automatic detection service, sprinkler system inside buildings, pump, hose, and hand extinguishers.	Water line, hose, and hand extinguishers.	Hydrant.
REMARKS	Grain is received for use at adjacent flour mill. Twenty concrete storage silos, located in rear of face, have total storage capacity for 500,000 bushels of wheat.	Two bulk cement storage silos at rear have capacity for 8,100 tons. Silos are equipped with one truck loading spout; normal loading rate 1,100 tons per hour.	Former freight house building at rear of lower section of wharf is leased to various private operators.

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 620	72073 Dock Code No. 275	72073 Dock Code No. 598
REFERENCE NUMBER ON MAP NO.	16	17	18
NAME	G & W Industries, Collision Bend Mooring Dock	Mid-Continent Coal & Coke Co. Dock.	River Dock, Inc. Dock.
LOCATION ON WATERFRONT	Right bank, Cuyahoga River, Collision Bend, below Eagle Avenue Bridge. Eagle Avenue.	Right bank, Cuyahoga River, above Eagle Avenue Bridge. 761 Stones Levee Road.	Right bank of Cuyahoga River, below Norfolk and Western Railway Bridge. 650 Harrison Street.
OWNED BY	CSX Transportation, Inc.	Mid-Continent Coal & Coke Co., and City of Cleveland.	River Dock, Inc.
OPERATED BY	G & W Industries, Inc. and City of Cleveland.	Mid-Continent Coal & Coke Co.	River Dock, Inc.
PURPOSE FOR WHICH USED	Mooring miscellaneous vessels, and mooring for repair.	Shipment of coke breeze by vessel.	Receipt of limestone by self-unloading vessels.
TYPE OF CONSTRUCTION	Steel sheet pile bulkhead with solid fill.	Part steel sheet pile bulkhead with part concrete-surfaced solid fill, part stone and part concrete-revetted natural bank.	Lower 630-foot section: steel sheet pile bulkhead with solid fill; upper 200-foot section: remains of timber pile bulkhead.
DESCRIPTION	Face	Face	Face
Dimensions (Feet)	510+510+210+50+285+160	195+1,000+550	630 and 200
Depth Alongside at LWD Do.	18-23	8	19-23
Breasting Distance Do.	1,925, total.	195+1,000+550	630
Total Berthing Space Do.	1,925, total.	195+1,000+550	630
Width of Apron Do.	Open.	Open.	Open.
Height of Deck at LWD Do.	7-9	6-9; 6-7	8-10
Load Capacity (Lbs. per Sq. Ft.)	-	-	-
Lighted or Unlighted	Unlighted.	Partly lighted.	Partly lighted.
MECHANICAL HANDLING FACILITIES	None.	One fixed electric loading tower with 36-inch retractable shuttle conveyor and loading chute having 19-foot outboard reach, served by a 36-inch electric inclined conveyor extending from ground-level pit at storage area in rear; rate 400 tons per hour.	One 4 1/2-cubic yard diesel, mobile, front-end loader.
RAILWAY CONNECTIONS	CSX Transportation, Inc. tracks in rear.	Two surface tracks in rear - one serving screening plant - connect with Consolidated Rail Corp.	Two marginal surface tracks extend along 630-foot section of wharf; connect with Consolidated Rail Corp. and Norfolk and Western Railway.
HIGHWAY CONNECTIONS	Via road unpaved and brick, 10-30 feet wide from West 3rd Street and Eagle Avenue.	Via Stones Levee Road, stone and asphalt, 25 feet wide.	Via road, unpaved, 10 feet wide, from West 3d Street, asphalt, 30 feet wide.
WATER SUPPLY (For Vessels)	None.	Through one 3/4-inch line.	None.
ELECTRIC CURRENT (For Vessels)	None.	A.C., 110/220 volts.	None.
FIRE PROTECTION (Other Than City)	None.	Hydrants and hose; hand extinguishers in rear.	None.
REMARKS	G & W Industries, Inc., Ship Repair Division, occasionally uses lower 510-foot section for performing marine repairs.	Screening plant located at rear. Open storage area provides capacity for 20,000 tons of screened and unscreened material. A 210-foot wharf section is owned by the city of Cleveland and provides for a utilities tunnel under the river. Cranwood Trucking Co., Inc. leases part of lower portion for a truck terminal.	Open storage area in rear has capacity for 780,000 tons of limestone.

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 590	72073 Dock Code No. 160	72073 Dock Code No. 556
REFERENCE NUMBER ON MAP NO.	19	20	21
NAME	Cleveland Builders Supply Co., Dock No. 2.	Ontario Stone Corp., Dock No. 2.	Marathon Petroleum Co., Cleveland Asphalt Terminal Barge Wharf.
LOCATION ON WATERFRONT	Right bank of Cuyahoga River, below West 3d Street Bridge. 2100 West 3d Street.	Right bank of Cuyahoga River, above West 3d Street Bridge. 2000 West 3d Street.	Right bank of Cuyahoga River, approximately 1,500 feet above West 3d Street Bridge. 2000 Independence Road.
OWNED BY	The Cleveland Builders Supply Co.	Ontario Stone Corp.	USX Corp.
OPERATED BY	The Cleveland Builders Supply Co.	Ontario Stone Corp.	Marathon Petroleum Co.
PURPOSE FOR WHICH USED	Receipt of sand, limestone, and occasionally other bulk materials by self-unloading vessels.	Receipt of limestone by self-unloading vessels.	Receipt of asphalt and #6 fuel oil by barge.
TYPE OF CONSTRUCTION	Steel sheet pile bulkhead with part concrete-surfaced solid fill.	Remains of timber bulkhead and concrete revetted bank.	Concrete bulkhead supported by timber piles, solid fill.
DESCRIPTION	Face	Face	Face
Dimensions (Feet)	1,750	1,200	682+176
Depth Alongside at LWD Do.	24	22	20-23
Breasting Distance Do.	1,680	565	858
Total Berthing Space Do.	1,680	565	858
Width of Apron Do.	Open.	Open.	Open.
Height of Deck at LWD Do.	6-8	8	8
Load Capacity (Lbs. per Sq. Ft.)	-	-	-
Lighted or Unlighted	Unlighted.	Partly lighted.	Lighted.
MECHANICAL HANDLING FACILITIES	Three diesel front-end loaders, one with 10-, and two with 6-cubic yard buckets, used at stockpile area to transfer material to 3 receiving hoppers, each with 24-inch wide, electric belt conveyor extending to batch plant in rear.	One 14-, two 12-, and one 8-cubic yard diesel front-end loaders also used at other company facilities Ref. Nos. 43, 48, and 49.	None.
RAILWAY CONNECTIONS	None.	CSX Transportation, Inc. tracks extend along rear of property.	None.
HIGHWAY CONNECTIONS	Via West 3d Street, asphalt, 30 feet wide.	Via driveway, stone, from Commercial Road and West 3d Street, asphalt, 30 feet wide.	Via terminal road, asphalt, 20 feet wide, from Broadway, asphalt, 40 feet wide.
WATER SUPPLY (For Vessels)	Through 4-inch line with 2 1/2-inch hose connections from batch plant.	None.	Through 2-inch line with 2-inch hose connections.
ELECTRIC CURRENT (For Vessels)	None.	A.C., 220 volts.	None.
FIRE PROTECTION (Other Than City)	Water line, hand extinguishers, hose, and security patrol.	Hand extinguishers.	Hydrants, hose, hand extinguishers, foam system and security patrol.
REMARKS	Two 60-ton truck scales are available. Open storage area in rear has capacity for approximately 185,000 tons of material.	Open storage area at rear has capacity for 100,000 tons of limestone.	Two 8-inch pipelines extend from concrete platform ten feet back from bulkhead to 3 steel, asphalt storage tanks, total capacity 172,300 barrels, and one steel, No. 6 fuel oil storage tank, capacity 15,000 barrels.

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 530		72073 Dock Code No. 508		72073 Dock Code No. 495
REFERENCE NUMBER ON MAP NO.	22		23		24
NAME	Marine Fueling Wharf.		Zaclom Plant Dock.		LTV Steel Corp., East Side, Lower Dock.
LOCATION ON WATERFRONT	Right bank, Cuyahoga River, and south side of slip, below Newburgh and South Shore Railway Bridge. 2400 Independence Road.		Right bank of Cuyahoga River and north side of turning basin, above CSX Transportation, Inc. bridge. 2981 Independence Road.		Right bank, Cuyahoga River, and south side of turning basin, below River Terminal Railway Bridge. 3430 Campbell Road.
OWNED BY	Marine Fueling, Division of Reiss Oil Terminal Corp.		Zaclom, Inc.		LTV Steel Corp.
OPERATED BY	Not operated.		Not operated.		Not operated.
PURPOSE FOR WHICH USED	Not used.		Not used for handling waterborne commerce.		Not used.
TYPE OF CONSTRUCTION	Steel sheet pile bulkhead with solid fill, fronted by timber fender system along river side and rubber tires on slip side.		River side: 440 feet of timber bulkhead along lower portion and 210 feet of steel sheet pile bulkhead at upper portion, all with solid fill. Turning basin side: steel sheet pile bulkhead with solid fill.		Steel sheet pile bulkhead with solid fill.
DESCRIPTION	Face	South side of slip	Face	Turning basin	Face
Dimensions (Feet)	470+65	400, approx.	650+170+30	550+140	290+455+967+679+175
Depth Alongside at LWD Do.	20-22	20-21	12-20	12-20	17-23
Berthing Distance Do.	470+65	350, approx.	650+170+30	550+140	290+455+967+679+175
Total Berthing Space Do.	535	350	650+170+30	550+140	2,586
Width of Apron Do.	Open.		Open and 12.		Open.
Height of Deck at LWD Do.	Top of piling 9.8; ground level, 11.4		10-13		10.7
Load Capacity (Lbs. per Sq. Ft.)	-		-		750-1,000
Lighted or Unlighted	Lighted.		Unlighted.		Unlighted.
MECHANICAL HANDLING FACILITIES	None.		None.		Equipment is available as required.
RAILWAY CONNECTIONS	None.		Plant trackage in rear connects with tracks of CSX Transportation, Inc.		River Terminal Railway: One marginal track extending along wharf joining additional plant trackage in rear connects with tracks of CSX Transportation, Inc.
HIGHWAY CONNECTIONS	Via private road, unpaved, 12 feet wide, from Independence Road, asphalt, 30 feet wide.		Via plant road, partly paved, various widths, from Independence Road, asphalt, 30 feet wide.		Via private roads, gravel, 10 feet wide, from Independence Road, asphalt, 30 feet wide.
WATER SUPPLY (For Vessels)	None.		None.		Through line * with 2-inch hose connections.
ELECTRIC CURRENT (For Vessels)	None.		None.		None.
FIRE PROTECTION (Other Than City)	None.		Pumps, hydrants, hose reels, and security patrol.		Hydrants in rear, hose, hand extinguishers, and security patrol.
REMARKS	Two 8-/10- and two 8-inch pipelines extend from face of wharf to 3 steel storage tanks at rear, total capacity 108,100 barrels.		Sulfuric acid plant located in rear.		Wharf was formerly used for receipt of limestone and dolomite and shipment of steel products. Open storage area at rear for 74,000 tons of material. Plant water treatment facility located at rear. One 24-inch pipeline extends from wharf to one 285,700-barrel fuel oil storage tank and one 8-inch pipeline with 4 connections at wharf, extend to 7 steel storage tanks, total capacity 142,900 barrels; in addition, storage tanks are connected to 2 storage tanks at LTV Steel Corp. No. 1 Coking Plant, total capacity 28,400 barrels and 2 tanks at the LTV Steel Corp. No. 2 Coking Plant, total capacity 11,900 barrels.

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 435	72073 Dock Code No. 440	72073 Dock Code No. 435
REFERENCE NUMBER ON MAP NO.	25	26	27
NAME	LTV Steel Corp., Fuel Oil Dock.	LTV Steel Corp., East Side, Upper Dock.	LTV Steel Corp., West Side, Middle Dock.
LOCATION ON WATERFRONT	Right bank, Cuyahoga River, above Norfolk and Western Railway Bridge at Clark Avenue. 3430 Campbell Road.	Right bank, Cuyahoga River, below Norfolk and Western Railway bridge at head of navigation. 3430 Campbell Road.	Left bank, Cuyahoga River, between the upper and lower Norfolk and Western Railway bridges. 3430 Campbell Road.
OWNED BY	LTV Steel Corp.	LTV Steel Corp.	LTV Steel Corp.
OPERATED BY	LTV Steel Corp.	LTV Steel Corp.	LTV Steel Corp.
PURPOSE FOR WHICH USED	Receipt of fuel oil.	Receipt of iron ore pellets by self-unloading vessel and mooring vessels during closed navigation season.	Receipt of iron ore pellets and limestone by self-unloading vessel, ferrous scrap, and fuel oil for plant consumption; occasional shipment of steel products.
TYPE OF CONSTRUCTION	Steel sheet pile bulkhead with solid fill.	Center 976-foot section: concrete bulkhead supported by steel pipe piles; remainder: steel sheet pile bulkhead; all with solid fill.	Upper 1,000 feet: natural bank; remainder part concrete-capped steel sheet pile bulkhead with solid fill; and part steel sheet pile cells with solid fill and concrete superstructure.
DESCRIPTION	Face	Face	Face
Dimensions (Feet)	1,150	1,320	1,000+1,780+50
Depth Alongside at LWD Do.	20	20-23	19-23
Breasting Distance Do.	1,150	1,290	1,000+1,780
Total Berthing Space Do.	1,150	1,320	1,000 +1,780
Width of Apron Do.	Open.	Open.	Open.
Height of Deck at LWD Do.	12 and 8-12	10	9.5
Load Capacity (Lbs. per Sq. Ft.)	-	750	750-1,000
Lighted or Unlighted	Partly lighted.	Lighted.	Lighted.
MECHANICAL HANDLING FACILITIES	None.	Two electric, traveling, bridge cranes with 15-ton buckets serve open ore storage area at rear, handling rate 700 tons per hour. In addition, one diesel-electric, crawler, bulldozer and three 1 3/4-cubic yard diesel, front-end loaders are available for rehandling material in open storage area.	One electric, traveling bridge crane with 15-ton bucket for handling limestone travels 900 feet along upper portion of wharf; one electric, traveling, bridge crane with 17-ton bucket for handling iron ore pellets travels 700 feet along lower portion of wharf; two 10-cubic yard, diesel, front-end loaders reclaim iron ore pellets to a ground-level hopper served by 30-inch conveyor belt extending to blast furnace.
RAILWAY CONNECTIONS	River Terminal Railway: Surface tracks along rear of face join additional trackage serving steel mill; connect with tracks of CSX Transportation, Inc. and Norfolk and Western Railway.	River Terminal Railway: One surface track extends along rear of face and joins additional plant trackage; connects with tracks of CSX Transportation, Inc. and Norfolk and Western Railway.	Cuyahoga Valley Railway: One surface track extends along rear of wharf and one spur track extends along upper portion of same section; join with additional plant trackage in rear; connect with tracks of CSX Transportation, Inc. and Norfolk and Western Railway.
HIGHWAY CONNECTIONS	Via Old Campbell Road, asphalt, 15 feet wide, from Independence Road, asphalt, 30 feet wide.	Via Old Campbell Road, asphalt, 15 feet wide, from Independence Road, asphalt, 30 feet wide.	Via plant roads, various widths, from West 3d Street.
WATER SUPPLY (For Vessels)	None.	Through one 2-inch line with hose connections.	Through 3-inch line with 1 1/2-inch hose connections.
ELECTRIC CURRENT (For Vessels)	A.C., 110 volts.	A.C., 110 volts.	A.C., 110 volts.
FIRE PROTECTION (Other Than City)	Hydrants, hose, and hand extinguishers.	Pumps, hydrants, hose reels, hand extinguishers, and security patrol.	Water line, hand extinguishers, and security patrol.
REMARKS	One 24-inch pipeline with two 8-inch connections at two separate locations, extends from wharf to one 285,700-barrel storage tank at steel mill in rear.	Ore storage trough at rear, capacity 35,500 tons; open storage area located in rear of trough, has capacity for 674,000 long tons of iron ore pellets. Plant water intake at upper end of wharf is protected by projecting timber pile fenders.	Open storage areas at rear of upper portion, in storage trough and under bridge cranes, have total storage capacity for 850,000 tons of iron ore pellets and 50,000 tons of limestone. Alternate limestone storage area has capacity for 150,000 tons. One 10-inch pipeline extends from face near lower end of wharf to 3 steel, fuel oil storage tanks at plant in rear, total capacity 238,500 barrels. Additional reserve storage for iron ore pellets is available at rear of Ref. Nos. 9 and 18.

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 410	72073 Dock Code No. 362	72073 Dock Code No. 385
REFERENCE NUMBER ON MAP NO.	28	29	30
NAME	LTV Steel Corp., West Side Lower Dock.	C-I-L Chemicals Wharf.	Koppers Co., Cleveland Wharf.
LOCATION ON WATERFRONT	Left bank, Cuyahoga River, between Baltimore and Ohio Railroad and River Terminal Railway Bridges. 3430 Campbell Road.	Left bank, Cuyahoga River, above foot of Mary Avenue. 2545 West Third Street.	Left bank, Cuyahoga River, below foot of Mary Avenue. 2500 West Third Street.
OWNED BY	LTV Steel Corp.	C-I-L Chemicals, Inc.	Koppers Co., Inc.
OPERATED BY	LTV Steel Corp.	C-I-L Chemicals, Inc.	Not operated.
PURPOSE FOR WHICH USED	Receipt of iron ore pellets and limestone; occasional shipment of steel products; mooring vessels during closed navigation season.	Receipt of sulfuric acid.	Not used.
TYPE OF CONSTRUCTION	Lower portion: 460 feet of timber bulkhead and 1,010 feet of steel sheet pile bulkhead, all with solid fill. Center portion: 1,044 feet of concrete bulkhead supported by timber piles, solid fill, fronted by steel sheet piling. Upper portion: 817 feet of steel sheet pile bulkhead with solid fill.	Steel sheet pile bulkhead with concrete-surfaced solid fill, fronted by timber fender system.	Steel pile, steel-decked wharf with 85- by 4-foot steel grating approach to upper side; 2 timber breasting dolphins on each side in line with face.
DESCRIPTION	Face	Face	Face
Dimensions (Feet)	817+1,044+1,470	375	36
Depth Alongside at LWD Do.	10-23	10-20	19
Breasting Distance Do.	1,044+1,010	340	120 with dolphins.
Total Berthing Space Do.	1,044+1,010	340	120
Width of Apron Do.	Open.	Open.	Open.
Height of Deck at LWD Do.	10.7	8-9	5
Load Capacity (Lbs. per Sq. Ft.)	-	-	-
Lighted or Unlighted	Lighted.	Lighted.	Lighted.
MECHANICAL HANDLING FACILITIES	One electric, traveling, bridge crane, with 15-ton bucket, capacity 500 tons per hour; one electric car pusher. Use of equipment described under Ref. No. 26.	None.	One hand-operated, chain fall hoist for handling hose.
RAILWAY CONNECTIONS	River Terminal Railway: Three surface tracks along rear of center portion of wharf join additional trackage serving plant in rear; connect with tracks of CSX Transportation, Inc. and Norfolk and Western Railway.	Surface track serving plant in rear connects with tracks of CSX Transportation, Inc.	Surface track serving plant in rear connects with tracks of CSX Transportation, Inc.
HIGHWAY CONNECTIONS	Via plant roads from West 3d Street, asphalt, 30 feet wide.	Via Mary Avenue, concrete, 20 feet wide, from West 3d Street, asphalt, 30 feet wide.	Via Mary Avenue, concrete, 20 feet wide, from West 3d Street, asphalt, 30 feet wide.
WATER SUPPLY (For Vessels)	Through 2-inch line with hose connections.	Through 2 1/2-inch line.	Through 4-inch line with 2-inch connections.
ELECTRIC CURRENT (For Vessels)	A.C., 110 volts from generators for winter mooring.	A.C., 110 volts.	A.C., 110 volts.
FIRE PROTECTION (Other Than City)	Hydrants, hose, hand extinguishers, and security patrol.	Hydrant, hose, and hand extinguishers.	Fire line and hand extinguishers.
REMARKS	Limestone is received by self-unloading vessels at upper portion of wharf. Ore storage area at rear has capacity for 750,000 tons of iron ore pellets and 35,000 tons of limestone.	One 12-inch pipeline with one 6- and one 8-inch wharf connections, extends to 2 steel storage tanks in rear, total capacity 10,000 tons.	-

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 370	72073 Dock Code No. 371	72073 Dock Code No. 360
REFERENCE NUMBER ON MAP NO.	31	32	33
NAME	Cleveland Builders Supply Co., Dock No. 1.	Gulf Oil Refining and Marketing Co., Cleveland Terminal Wharf.	Clifton Concrete & Supply Co. Wharf.
LOCATION ON WATERFRONT	Left bank, Cuyahoga River, above foot of Jefferson Avenue. 2000 West Third Street.	Left bank, Cuyahoga River, between Consolidated Rail Corp. (Erie-Lackawanna Railway bridge and foot of Jefferson Avenue). 250 Jefferson Ave.	Left bank, Cuyahoga River, below Consolidated Rail Corp. (Erie-Lackawanna) Railway Bridge. 101 Mahoning Ave.
OWNED BY	Cleveland Builders Supply Co.	Gulf Oil Refining and Marketing Co.	Mobil Oil Corp.
OPERATED BY	Cleveland Builders Supply Co.	Not operated.	Clifton Concrete & Supply Co.
PURPOSE FOR WHICH USED	Occasional receipt of sand and stone by self-unloading vessels.	Not used.	Receipt of sand and stone by self-unloading vessel.
TYPE OF CONSTRUCTION	Steel sheet pile bulkhead with concrete-surfaced solid fill.	Steel sheet pile bulkhead, part concrete-capped; all with solid fill.	Upper 300-foot portion: steel sheet pile bulkhead with solid fill; remainder: concrete- and stone-revetted bank over remains of timber bulkhead with solid fill, part concrete surfaced.
DESCRIPTION	Face	Face	Face
Dimensions (Feet)	480	855	693
Depth Alongside at LWD Do.	19-20	19-23	18-23
Breasting Distance Do.	480	850	693
Total Berthing Space Do.	480	850	-
Width of Apron Do.	Open.	Open.	Open.
Height of Deck at LWD Do.	8-9	11 and 8.	10-12
Load Capacity (Lbs. per Sq. Ft.)	-	750	-
Lighted or Unlighted	Unlighted.	Lighted.	Unlighted.
MECHANICAL HANDLING FACILITIES	Three diesel front-end loaders, one with 10-, and two with 6-cubic yard buckets; used at stockpile area to transfer material to 3 receiving hoppers, each with 24-inch-wide electric belt conveyor extending to batch plant in rear.	None.	One diesel, front-end loader with 5-cubic yard bucket transfers material from stockpiles on wharf to receiving hoppers at rear. One hopper served by bucket elevator to storage bins and 3 hoppers, one for sand and 2 for stone, are served by one 30- and one 24-inch, electric belt conveyors extending to concrete batch plants in rear.
RAILWAY CONNECTIONS	None.	None.	None.
HIGHWAY CONNECTIONS	Via Scothan Avenue, concrete, 30 feet wide, from West 3d Street, asphalt, 30 feet wide.	Via Jefferson Avenue, stone block, 36 feet wide, from West 3d Street, asphalt, 30 feet wide.	Via Mahoning Avenue, asphalt, 20 feet wide, from West 3d Street.
WATER SUPPLY (For Vessels)	Through one 2 1/2-inch line with hose connections.	None.	None.
ELECTRIC CURRENT (For Vessels)	None.	None.	None.
FIRE PROTECTION (Other Than City)	Water line, hose, and security patrol.	Automatic liquid foam system, chemical carts, and hand extinguishers.	Hand extinguishers.
REMARKS	Open storage area in rear has capacity for 70,000 tons of sand and stone.	Two 6-inch pipelines extend from wharf to 8 steel storage tanks located in rear, total capacity 351,000 barrels. At time of survey, tanks were empty and temporarily out of operation.	Open storage areas at rear of lower portion of wharf have capacity for 25,000 tons of stone and 18,400 tons of sand.

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 339	72073 Dock Code No. 337	72073 Dock Code No. 329
REFERENCE NUMBER ON MAP NO.	34	35	36
NAME	Fleet Supply, Inc., Dock.	Shell Oil Co. Wharf.	Cleveland Builders Supply Co., "F" Mill Dock.
LOCATION ON WATERFRONT	Left bank, Cuyahoga River, approximately 550 feet above West 3d Street Bridge. 250 Mahoning Ave.	Left bank, Cuyahoga River, above West 3d Street Bridge. 2201 West 3d Street.	Left bank, Cuyahoga River, below West 3d Street Bridge. 2100 West 3d Street.
OWNED BY	Fleet Supply, Inc.	Shell Oil Co.	Cleveland Builders Supply Co.
OPERATED BY	Fleet Supply, Inc.	Shell Oil Co.	Cleveland Builders Supply Co.
PURPOSE FOR WHICH USED	Occasional receipt of diesel fuel and gasoline by barge.	Deployment of oil spill recovery boat in emergency.	Receipt of sand by self-unloading vessels.
TYPE OF CONSTRUCTION	Steel sheet pile bulkhead with solid fill; fronted by timber fender system.	Steel sheet pile bulkhead with solid fill.	Steel sheet pile bulkhead with concrete-surfaced solid fill; fronted by timber fender system.
DESCRIPTION	Face	Face	Face
Dimensions (Feet)	242+141	519	422
Depth Alongside at LWD Do.	17-20	16-21	10-22
Breasting Distance Do.	242+141	495	422
Total Berthing Space Do.	242+141	495	422
Width of Apron Do.	Open.	Open.	Open.
Height of Deck at LWD Do.	9	9	8
Load Capacity (Lbs. per Sq. Ft.)	1,000	1,000	-
Lighted or Unlighted	Partly lighted.	Lighted.	Unlighted.
MECHANICAL HANDLING FACILITIES	One 1 1/2- and one 3/4-ton hand operated mast-and-boom derricks with 20- and 30-foot booms, respectively.	One 3-ton, stiff-leg derrick with 30-foot boom for launching oil spill recovery craft.	Use of equipment described under Ref. No. 19.
RAILWAY CONNECTIONS	One surface track serves tank car loading rack; connects with Norfolk and Western Railway.	None.	One surface track in rear connects with Consolidated Rail Corp.
HIGHWAY CONNECTIONS	Via Dry Dock Street, asphalt, 20 feet wide, from Mahoning Avenue, asphalt, 20 feet wide.	Via West 3d Street, asphalt-concrete, 30 feet wide.	Via West 3d Street, asphalt, 30 feet wide.
WATER SUPPLY (For Vessels)	Through one 2-inch line with 1 1/2-inch hose connections.	None.	None.
ELECTRIC CURRENT (For Vessels)	A.C., 110 volts.	None.	None.
FIRE PROTECTION (Other Than City)	Foam line, hose, and hand extinguishers.	Foam system, hose, foam cart, hydrant, and security patrol.	Security patrol.
REMARKS	Two 6-inch pipelines extend from wharf to seven steel, storage tanks connect with inland pipeline, total capacity 405,200 barrels.	Wharf is not used for handling petroleum products; at time of survey, terminal received products by inland pipeline to 6 steel storage tanks in rear, total capacity 165,700 barrels. Bulkhead is fenced with gate for access.	Open storage area for sand located at rear of adjacent wharf (Ref. No. 37).

PIERS, WHARVES, AND DOCKS

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 329	72073 Dock Code No. -		72073 Dock Code No. 620
REFERENCE NUMBER ON MAP NO.	37	38		39
NAME	Cleveland Builders Supply Co. Dock No. 4.	City of Cleveland, Eagle Avenue Fireboat Wharf and Slip.		G & W Industries Wharf.
LOCATION ON WATERFRONT	Left bank, Cuyahoga River, approximately 500 feet below West 3d Street Bridge. 2100 West Third Street.	Left bank, Cuyahoga River, Collision Bend, below Eagle Avenue Bridge. 1801 Carter Road.		Left bank, Cuyahoga River, above Carter Road Bridge. 1898 Carter Road.
OWNED BY	Cleveland Builders Supply Co.	City of Cleveland.		Scranton-Averell, Inc.
OPERATED BY	Cleveland Builders Supply Co.	City of Cleveland, Department of Public Safety, Fire Department.		G & W Industries, Inc., Ship Repair Division.
PURPOSE FOR WHICH USED	Receipt of miscellaneous bulk materials.	Mooring city fireboat "Celebreeze".		Mooring vessels for repair; mooring small company-owned vessels used in connection with making repairs to vessels at other locations.
TYPE OF CONSTRUCTION	Steel sheet pile bulkhead with solid fill; fronted by timber fender system.	Wharf: steel sheet pile bulkhead with concrete-surfaced solid fill, fronted by rubber tire fenders. Slip: steel sheet pile retaining walls with solid fill.		Steel sheet pile bulkhead with solid fill, fronted by timber fender system.
DESCRIPTION	Face	Face of wharf	Slip	Face
Dimensions (Feet)	417+346	200	90 by 30	1,000
Depth Alongside at LWD Do.	18-23	18-20	0-16	18-23
Breasting Distance Do.	417+346	150	-	1,000
Total Berthing Space Do.	417+346	150	-	1,000
Width of Apron Do.	Open, 60, 40, & 12.	Open and 10	Open.	Open.
Height of Deck at LWD Do.	7 and 6.	6		8
Load Capacity (Lbs. per Sq. Ft.)	-	-		-
Lighted or Unlighted	Unlighted.	Lighted.		Lighted.
MECHANICAL HANDLING FACILITIES	Use of equipment described under Ref. No. 19.	None.		One 60-ton, diesel, crawler crane with 100-foot boom; one 25-ton, gasoline, mobile crane with 45-foot boom; and one 7-ton, gasoline, floating crane with 28-foot boom.
RAILWAY CONNECTIONS	None.	None.		One surface track extends across Carter Road through yard to face of wharf; connects with Consolidated Rail Corp.
HIGHWAY CONNECTIONS	Via West 3d Street, asphalt, 30 feet wide.	Via Scranton Road, asphalt, 32 feet wide, and Carter Road, asphalt, 30 feet wide.		Via Carter Road, asphalt, 20 feet wide.
WATER SUPPLY (For Vessels)	None.	Through 3/4-inch hose connection.		Through 1 1/2-inch line with hose connections.
ELECTRIC CURRENT (For Vessels)	None.	A.C., 110 volts.		A.C., 110/440 volts.
FIRE PROTECTION (Other Than City)	Sprinkler system in warehouse; hydrants, and hose.	Fireboat and hand extinguishers.		Water line, hose, hand extinguishers, and security patrol.
REMARKS	Open storage area has capacity for 40,000 tons of material.	Fire Station Engine Co. No. 2 and 21 is located in building in rear providing accommodations and headquarters for fireboat crew. Slip, located adjacent to lower end of wharf, is not used for berthing.		Wharf equipped with lines for supplying compressed air and water. Machine, fabrication, and pipe shops provide above-waterline repairs of any nature.

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 620	72073 Dock Code No. 250	72073 Dock Code No. 178
REFERENCE NUMBER ON MAP NO.	40	41	42
NAME	G & W Industries, Lower Dock.	United Ready Mix Dock.	Lafarge Cement Corp., Great Lakes Region, Cleveland Terminal Wharf.
LOCATION ON WATERFRONT	Left bank, Cuyahoga River, below Carter Road Bridge. 1898 Carter Road.	Left bank, Cuyahoga River, below Consolidated Rail Corp. bridge at foot of British Street. 1971 Carter Road.	Right bank, Old River, upper side of Sycamore Slip, foot of Hemlock Avenue. 2500 Elm Street.
OWNED BY	Scranton-Averell, Inc.	Forest City Enterprise, Inc.	Lafarge Cement Corp., Great Lakes Region.
OPERATED BY	G & W Industries, Inc., Ship Repair Division.	United Ready Mix, Inc.	Lafarge Cemnt Corp., Great Lakes Region.
PURPOSE FOR WHICH USED	Upper 400 feet: mooring vessels for repair; remainder: not used.	Receipt of stone by self-unloading vessel.	Receipt of bulk cement.
TYPE OF CONSTRUCTION	Part concrete deck supported by concrete-filled, steel pipe piles fronted by steel sheet pile bulkhead with solid fill; and part steel sheet pile bulkhead fronted with solid fill. Six- to 3.5-foot-high timber crib wall with solid fill extends along rear of concrete deck.	Above waterline: concrete bulkhead, solid fill, supported by timber piles, fronted by timber fender system; below waterline: timber bulkhead with solid fill; concrete bulkhead.	Concrete retaining wall supported by timber piles and timber bulkhead, all with solid fill; fronted by steel sheet pile bulkhead with solid fill; top of steel sheet pile bulkhead is 3.3 feet below top of concrete retaining wall; fronted by timber fender system.
DESCRIPTION	Face	Face	Face
Dimensions (Feet)	763	895	415
Depth Alongside at LWD Do.	19-24	18-24	24
Breasting Distance Do.	763	895	415
Total Berthing Space Do.	763	895	415
Width of Apron Do.	Open.	Open.	Open.
Height of Deck at LWD Do.	8.5-5	10	8-10
Load Capacity (Lbs. per Sq. Ft.)	-	1,000	-
Lighted or Unlighted	Unlighted.	Partly lighted.	Lighted.
MECHANICAL HANDLING FACILITIES	One 80-ton, diesel, crawler crane with 100-foot boom; one 25-ton, gasoline, mobile crane with 45-foot boom; and one 7-ton, gasoline, floating crane with 28-foot boom.	One 4-cubic yard, diesel front-end loader and one 9- and one 6-ton, diesel, forklift trucks.	None.
RAILWAY CONNECTIONS	None.	None.	None.
HIGHWAY CONNECTIONS	Via Carter Road, asphalt, 20 feet wide, from Carter Road Bridge.	Via Carter Road, asphalt, 20 feet wide, and Columbus Road, asphalt, 40 feet wide.	Via Elm Street, asphalt, 30 feet wide, from Main Avenue Bridge.
WATER SUPPLY (For Vessels)	None.	None.	Through one 1 1/2-inch line.
ELECTRIC CURRENT (For Vessels)	None.	None.	A.C., 110 volts.
FIRE PROTECTION (Other Than City)	Hydrants and hose.	Hand extinguishers.	Hand extinguishers.
REMARKS	-	Open storage area at rear provides approximately 3 acres of storage area and has capacity for 13,000 tons of gravel and 6,000 tons of sand.	Pumps on vessels unload bulk cement through two 10-inch pipelines extending from wharf to 17 concrete storage silos in rear, total capacity 36,000 tons. Trucks are loaded with bulk cement at rate of 300 tons per hour. Two bagging machines are available. One 6-inch sewer line for vessels serve wharf.

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 160	72073 Dock Code No. 055	72073 Dock Code No. 999
REFERENCE NUMBER ON MAP NO.	43	44	45
NAME	Ontario Stone Corp., Dock No. 4.	Great Lakes Towing Co., Shipyard Wharf.	Dunbar and Sullivan Dredging Co. Slip.
LOCATION ON WATERFRONT	Right bank, Old River, above Willow Avenue Bridge. 4000 Division Ave.	Right bank, Old River, at foot of West 45th Street extended. 4500 Division Ave.	Left bank, Old River, approximately 1,000 feet below head of Old River. Edgewater Branch.
OWNED BY	Ontario Stone Corp.	The Forest Publishing Co.	Dunbar & Sullivan Dredging Co..
OPERATED BY	Ontario Stone Corp.	Great Lakes Towing Co., Shipyard Division.	Dunbar & Sullivan Dredging Co..
PURPOSE FOR WHICH USED	Receipt of limestone, and other bulk commodities by self-unloading vessels.	Mooring company-owned floating equipment for outfitting, conversion, and repair; mooring floating drydock.	Mooring company-owned floating equipment for storage, service, and repair; handling construction equipment and materials.
TYPE OF CONSTRUCTION	Steel sheet pile and part timber bulkhead with solid fill; narrow timber apron at east end.	Steel sheet pile bulkhead with part asphalt-surfaced and part concrete-surfaced solid fill.	Irregular-shaped slip formed by timber pile bulkhead with solid fill; fronted by timber breasting dolphins.

DESCRIPTION	Face	Face	East side	Head of slip	Upper side	Lower side
Dimensions (Feet)	65+1,620+385	608	30	125	816	420+60+540
Depth Alongside at LWD Do.	19-26	13-20	-	12	12-16	12-16
Breasting Distance Do.	1,620	608	-	125	816	420+540
Total Berthing Space Do.	1,620	608	-	125	816	420+540
Width of Apron Do.	Open.	Open.		Open.		
Height of Deck at LWD Do.	7	3		4-6		
Load Capacity (Lbs. per Sq. Ft.)	-	-		-		
Lighted or Unlighted	Lighted.	Lighted.		Lighted.		

MECHANICAL HANDLING FACILITIES	One 14-, two 12-, and one 8-cubic yard diesel front-end loaders also used at other company facilities, Ref. Nos. 20, 48, and 49.	One 5-ton, diesel, locomotive crane with 50-foot boom.	The following cranes are available for public hire as required: TYPE / CAPACITY (Tons) / BOOM LENGTH (Feet) Diesel crawler / 100 / 700 Diesel crawler / 50 / 70 Diesel crawler / 20 / 50 Diesel floating w/jack-up spuds / 150 / 170 Steam floating "Cherokee" / 75 / 125 "Iroquois" / 50 / 135 "No. 4" / 40 / 85 "No. 5" / 30 / 95
RAILWAY CONNECTIONS	None.	One 580-foot surface track extends along rear of face of wharf for use of locomocive crane.	Consolidated Rail Corp: One surface track extends along lower side of slip.
HIGHWAY CONNECTIONS	Via West 45th Street and Division and River Avenues, asphalt, 20 feet wide.	Via West 45th Street, asphalt, 30 feet wide, from West Memorial Shoreway.	Via road, part asphalt, 10-20 feet wide, from Edgewater Park exit of West Memorial Shoreway.
WATER SUPPLY (For Vessels)	None.	Through 1 1/2-inch hose connection.	Through 2-inch line with 1 1/2-inch hose connection from 6-inch main.
ELECTRIC CURRENT (For Vessels)	None.	A.C., 110/220/440 volts.	A.C., 110/220/440 volts.
FIRE PROTECTION (Other Than City)	None.	Water line, hose, hand extinguishers, and security patrol.	Water line, hose, hand extinguishers. hydrants and hose in rear, and security patrol.
REMARKS	Open storage area on wharf and in rear has capacity for approximately 300,000 tons of material.	A 250-ton floating drydock is moored alongside face of wharf. Marine repair facilities located in rear. Occasional repair work is done on commercial vessels.	Offices and repair plant located in rear.

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 115	72073 Dock Code No. 107	72073 Dock Code No. 077
REFERENCE NUMBER ON MAP NO.	46	47	48
NAME	International Salt Co. Cleveland Mine Wharf.	Sand Products Corp., Dock No. 1.	Ontario Stone Corp., Dock No. 3.
LOCATION ON WATERFRONT	Whiskey Island, left bank, Old River, approximately 1,300 feet below head of River.	Whiskey Island, left bank, Old River, approximately 0.4 mile west of Willow Avenue Bridge.	Whiskey Island, left bank of Old River, approximately 1,100 feet above Willow Avenue Bridge.
OWNED BY	International Salt Co., a part of AKZO America.	Sand Products Corp.	Ontario Stone Corp.
OPERATED BY	International Salt Co., a part of AKZO America.	Brian D. Stickney, Contractor.	Ontario Stone Corp.
PURPOSE FOR WHICH USED	Shipment of graded dry bulk rock salt.	Receipt of sand by self-unloading vessels.	Receipt of limestone by self-unloading vessels, and receipt of other bulk commodities by order.
TYPE OF CONSTRUCTION	Concrete retaining wall with asphalt-surfaced solid fill, on concrete relieving platform supported by concrete-filled, steel pipe piles; all extending from st.. sheet p'le bulkhead with solid fill. Rubber tire and timber fenders along face.	Natural bank and remains of timber bulkhead with solid fill.	Concrete bulkhead with solid fill.
DESCRIPTION	Face	Face	Face
Dimensions (Feet)	602+355	1,000 approx.	600
Depth Alongside at LWD Do.	18-24	20-25	25
Breasting Distance Do.	602+355	1,000 approx.	600
Total Berthing Space Do.	602+355	1,000 approx.	600
Width of Apron Do.	Open & 45-75.	Open.	Open.
Height of Deck at LWD Do.	12.1	-	8
Load Capacity (Lbs. per Sq. Ft.)	700	-	-
Lighted or Unlighted	Lighted.	Unlighted.	Unlighted.
MECHANICAL HANDLING FACILITIES	One fixed loading tower on wharf, equipped with hopper, shuttle conveyor boom, and loading spout; outboard reach 38 feet; maximum loading rate 3,300 tons per hour, average rate 1,500 tons per hour. Tower is served by an enclosed, 48-inch wide, electric, belt-conveyor system served by six 30-inch belt conveyors extending from storage bins. In addition, 36-inch belt conveyors serve bins from cylindrical storage building and mine.	One 4-cubic yard, diesel, front-end loader.	One 14-, two 12-, and one 8-cubic yard, diesel, front-end loaders also used at Docks Nos. 2 and 1 (P.W.D. Ref. Nos. 20, 43, and 49, respectively).
RAILWAY CONNECTIONS	Plant trackage in rear connects with Consolidated Rail Corp.	None.	None.
HIGHWAY CONNECTIONS	Via road, asphalt, 30-40 feet wide, from Willow Avenue Bridge.	Via road, unpaved, 15 feet wide, and road, asphalt, 30 feet wide, from Willow Avenue Bridge.	Via road, unpaved, 15 feet wide, and road, asphalt, 30 feet wide, from Willow Avenue Bridge.
WATER SUPPLY (For Vessels)	Through 3-inch line with 2 1/2-inch hydrant connection.	None.	None.
ELECTRIC CURRENT (For Vessels)	A.C., 110 volts.	None.	None.
FIRE PROTECTION (Other Than City)	Hydrants, hose, hand extinguishers, and security guard.	Hand extinguishers.	None.
REMARKS	Cylindrical storage building has capacity for 40,000 tons and 6 interior storage bins located over conveyor lines have total capacity for 6,000 tons. Salt mine and plant located in rear.	Front-end loader transfers sand from stockpiles to a 24-inch feeder belt extending to a bucket elevator serving drying plant in rear. Processed foundry sand is transferred from drying plant by gravity and via bucket elevator to 4 storage silos equipped with 5 truckloading spouts, total capacity 1,000 tons. silos equipped with 5 truckloading spouts.	Open storage area on wharf and in rear has capacity for approximately 200,000 tons of material.

CORPS OF ENGINEERS PORT CODE NO.	72073 Dock Code No. 050	72073 Dock Code No. 055		72073 Dock Code No. 010
REFERENCE NUMBER ON MAP NO.	49	50		51
NAME	Ontario Stone Corp., Dock No. 1.	Great Lakes Dredge and Dock Co., Whiskey Island Yard Dock.		Consolidated Rail Corp., Cleveland Ore Dock No. 11.
LOCATION ON WATERFRONT	Left bank of Cuyahoga River, above Consolidated Rail Corp. bridge. Willow Avenue.	Lakefront, West Basin, approximately 0.4 mile west of entrance to Cuyahoga River. Edgewater Branch		Lakefront, West Basin, approximately 0.6 mile west of entrance to Cuyahoga River. Edgewater Branch
OWNED BY	Ontario Stone Corp.	Consolidated Rail Corp.		Consolidated Rail Corp.
OPERATED BY	Ontario Stone Corp.	Great Lakes Dredge and Dock Co.		Ohio and Western Pennsylvania Dock Company.
PURPOSE FOR WHICH USED	Receipt of limestone and other bulk commodities by self-unloading vessels.	Mooring company-owned floating equipment for storage, limited repair, and service; handling construction equipment and materials.		Receipt of iron ore and iron ore pellets.
TYPE OF CONSTRUCTION	Steel sheet pile bulkhead with solid fill fronted by rubber tire fenders.	Rectangular basin formed by remains of timber pile bulkhead with solid fill; approximately 260 feet of south side fronted by steel sheet pile bulkhead. Additional berthing is available at 2 timber breasting dolphins located at center of basin.		Part concrete bulkhead supported by timber piles; partly fronted by steel sheet piling; and part steel sheet pile bulkhead; all with solid fill. Two solid-filled, steel sheet pile, cellular, breast- ing dolphins at east end in line with face.
DESCRIPTION	Face	East side	South side	Face
Dimensions (Feet)	500	500	550	1,630
Depth Alongside at LWD Do.	25	6-13	6-18	24-30
Breasting Distance Do	500	500	550	1,875 w/dolphins
Total Berthing Space Do.	500	500	550	1,875
Width of Apron Do.	Open.	Open.		Open.
Height of Deck at LWD Do.	8	6		9
Load Capacity (Lbs. per Sq. Ft.)	-	-		1,000
Lighted or Unlighted	Partly lighted.	Partly lighted.		Lighted.
MECHANICAL HANDLING FACILITIES	Use of equipment described under Ref. No. 48.	Contractor's equipment is available as required.		Four electric, hulett-type ore unloaders with 17-ton buckets, capacity 800 tons per hour each; a total of 45 cars per hour can be loaded directly from hulletts; open storage area at rear is served by two 12-cubic yard, diesel, front-end loaders.
RAILWAY CONNECTIONS	None.	Consolidated Rail Corp.: Surface tracks serve plant in rear.		Consolidated Rail Corp.: Four marginal surface tracks along rear of face and one surface track in storage area, total capacity 110 cars; connect with 250-car capacity West Breakwater Yard located along rear.
HIGHWAY CONNECTIONS	Via road, asphalt, 20 feet wide, from Willow Avenue Bridge.	Via road, part cinder and part gravel, varous widths, from Edgewater Park exit off West Memorial Shoreway.		Via road, part cinder and part gravel, various widths, from Edgewater Park exit off West Memorial Shoreway.
WATER SUPPLY (For Vessels)	None.	Through 1 1/2-inch line.		None.
ELECTRIC CURRENT (For Vessels)	A.C., 240/440 volts.	A.C., 110/220 volts.		None.
FIRE PROTECTION (Other Than City)	Hand extinguishers.	Water line, hose, pumps, hand extinguishers, and security patrol.		Pump, hose, hand extinguishers, and security patrol.
REMARKS	Open limestone storage area on wharf and in rear has total capacity for 140,000 tons.	Contractor's equipment storage yard located in rear.		Steel catwalk connects east end of wharf to mooring dolphins. Concrete storage trough in rear of unloaders, and an open area in rear provides storage for 1,000,000 tons of ore. Additional Consolidated Rail Corp. yards on Whiskey Island support this ore-handling facility.

OIL HANDLING AND BUNKERING

Five of the waterfront facilities described in this report are equipped to receive petroleum products: two connect with inland pipeline, one receives asphalt, and two receive fuel oil for plant consumption; three are along the left bank and two are on the right bank of the Cuyahoga River. Depending on the location, vessels at berth are occasionally supplied with bunker fuel by tank trucks.

The tabulation below gives information on these facilities; details are given in the table of Piers, Wharves, and Docks, beginning on page 18, under the reference numbers indicated. Tank storage at recreational craft service stations is not included.

P.W.D. REF. NO.	OPERATOR	BERTHING SPACE (FEET)	DEPTH ALONGSIDE LWD (FEET)	STORAGE TANKS	
				NO.	CAPACITY (BARRELS)
34(I)	Fleet Supply, Inc.....	242+141	17-20	7	406,200
27	LTV Steel Corp.....	1,000+ 1,780	19-23	3	238,500(F)
25	LTV Steel Corp.....	1,150	20	1	285,700(F)
21	Marathon Petroleum Co.....	682+170	20-23	3	172,300(A) 15,000(F)
35(I)	Shell Oil Co.....	495	16-21	6	165,700
	TOTALS....	--	--	21	1,283,400

(F) Fuel oil for plant consumption.
(A) Asphalt.
(I) All petroleum products are received by inland pipeline.

DRY BULK HANDLING

Five of the waterfront facilities at the port receive iron ore mostly in pelletized form to supply the local and regional steel industry. The wharves are owned by or are under lease to various steel companies for the receipt and stockpiling of ore and/or limestone.

One company, The Ohio & Western Pennsylvania Dock Co. (P.W.D. Ref. No. 51) operates the only wharf still using hulett unloaders; all the others are served by self-unloading vessels.

Other operators at the port handle limestone for the steel industry, for their own use and/or for local distribution. Mid-Continent Coal & Coke Co. (P.W.D. Ref. No. 17) ships coke breeze, another product related to the steel industry.

A summary of the dry bulk handling facilities is given on the following page; further details are given in the table of Piers, Wharves, and Docks, beginning on page 18 under the reference numbers indicated.

WAREHOUSES

Within the Cleveland port area, 14 companies operate a total of 1,777,000 square feet of dry storage space and 9,023,495 cubic feet of cooler and freezer space; all but one of the warehouses have rail connections, and all are easily accessible to arterial highways. Diversified handling equipment is maintained by the operators, and special services are provided, including packing and crating, forwarding, pool car distribution, carloading, weighing, stamping, and marking. The facilities listed in the table of Storage Warehouses represent largely the respondents to a mailed questionnaire, as time restrictions precluded field gathering of information.

The summary on page 38 lists the operators and gives the storage capacities of the responsive dry and cold storage facilities, which are more fully described under individual reference numbers in the table of Storage Warehouses beginning on page 39.

In addition to the warehouses listed in the summary, there are 259,350 square feet of dry storage space available to the public at 2 transit sheds (when they are not being used for transit cargo) operated by the Cleveland-Cuyahoga County Port Authority and 2 operated by Cleveland Stevedore Co. They are more fully described under P.W.D. Ref. Nos. 5, 7, and 8 in the table of Piers, Wharves, and Docks beginning on page 18.

OPEN STORAGE

In addition to the long- and short-term, covered storage facilities for waterborne cargo, the Cleveland-Cuyahoga County Port Authority has open storage areas available to the public for storing commodities not requiring protection from the weather. These areas, totaling about 23 acres, are on and at rear of the Port Authority's general cargo piers and wharves (P.W.D. Ref. Nos. 5 through 9); each is paved, protected by watchman service, and served by railroad tracks and improved streets and roadways. During the closed navigational season, additional open storage areas are available to the public at the Port Authority's general cargo facilities.

Other operators with waterfront facilities at the Port of Cleveland have open storage areas to meet their own operational requirements; these areas usually are not available for public use.

SUMMARY OF DRY BULK HANDLING

P.W.D. REF NO.	OPERATOR	BERTHING SPACE (FEET)	DEPTH (FEET-LWD)	HANDLING EQUIPMENT TYPE (TONS/HR)	PRODUCTS	STORAGE CAPACITY
19	Cleveland Builders Supply Co., The	1,680	6-8	Self-unloading vessels.	Limestone, sand, misc.	185,000 tons.
31	do.	480	19-20	do.	Sand, stone.	70,000 tons.
36	do.	422	10-22	do.	Sand.	-
37	do.	417+346	18-23	do.	Misc.	40,000 tons.
9	Cleveland-Cuyahoga County Port Authority	775	21-25	do.	Misc.	240,000 tons.
8	Cleveland Stevedore Co.	519+672	27	do.	Fluorspar/ bauxite.	3 acres.
33	Clifton Concrete & Supply Co.	693	18-23	do.	Stone. Sand.	25,000 tons. 18,400 tons.
46	International Salt Co.	602+355	18-24	Conveyor belt system (1,500).	Salt.	46,000 tons.
26	LTV Steel Corp.	1,250	20-23	Self-unloading vessels.	Iron ore pellets.	709,500 tons.
27	do.	1,000+ 1,780	19-23	do.	Iron ore pellets. Limestone.	850,000 tons. 150,000 tons.
28	do.	1,044+ 1,010	10-23	do.	Iron ore pellets. Limestone.	750,000 tons.
42	Lafarge Cement Corp.	415	24	do.	Cement.	36,000 tons.
14	Medusa Cement Co.	600	20-23	do.	Cement.	8,100 tons.
17	Mid-Continent Coal & Coke Co.	195+1,000	8	Conveyor belt system (400).	Coke breeze.	20,000 tons.
51	Ohio & Western Pennsylvania Dock Co.	1,875	24-30	4 huletts (800, each).	Iron ore/ iron ore pellets.	1,000,000 tons.
20	Ontario Stone Corp.	565	22	Self-unloading vessels.	Limestone.	100,000 tons.
43	do.	1,620	19-26	do.	do.	300,000 tons.
48	do.	600	25	do.	do.	230,000 tons.
49	do.	500	25	do.	do.	140,000 tons.
18	River Dock, Inc.	630	19-23	do.	Limestone.	780,000 tons.
47	Sand Products Corp.	1,000	20-25	do.	Sand.	4 acres.
41	United Ready Mix, Inc.	895	18-24	do.	Gravel. Sand.	13,000 tons. 6,000 tons.

DRY AND COLD STORAGE WAREHOUSES

S.W. REF. NO.	OPERATOR	STORAGE AREA	
		DRY (SQ.FT.)	COLD (CU.FT.)
14	Amware Distribution Warehouses.....	210,000 40,000(B) 5,000(H)	2,000(C)
2	Bridgeton Refrigerated Warehouse d.b.a. Gateway Refrigeration Co....	10,000	1,320,655(C) 1,424,430(F)
13	do.....	20,000	544,370(C) 1,360,540(F)
10	City Industrial, Inc.....	136,000	-
5	Cleveland Express Trucking Co.....	20,000	-
12	Interstate Terminal Warehouse, Inc...	70,000	-
4	Itel Distribution Systems, Inc.....	400,000	-
1	Lederer Terminals, Inc.....	100,000	-
9	do.....	172,000	3,000(C)
6	National Commercial Warehousing Corp.	130,000	-
7	National Terminals Corp.....	-	3,811,500(F)
11	Norris Brothers Co., Inc.....	100,000	-
8	Rockside Distribution Center Co.....	264,000	280,000(C) 277,000(F)
3	Roy's Distribution Services, Inc.....	100,000	-
	TOTALS.....	1,777,000	9,023,495

(B) Bonded.
(H) Hazardous materials.
(C) Cooler.
(F) Freezer.

STORAGE WAREHOUSES

WAREHOUSE REF. NO.	1	2
OPERATOR AND ADDRESS	Lederer Terminals, Inc. 16645 Granite Road Maple Heights, OH 44137	Bridgeton Refrigerated Warehouse d.b.a. Gateway Refrigeration Co. 3725 Croton Avenue Cleveland, OH 44115
BUILDING DESIGNATION/S	Crayton Avenue Warehouse.	Warehouse No. 1
LOCATION	4500 Crayton Avenue.	Same as above.
KIND OF STORAGE	Dry.	Dry, cold, and cooler.
COMMODITIES USUALLY STORED	General merchandise, industrial goods.	Perishable food commodities.
DESCRIPTION Type of Construction Number of Floors Clear Height for Storage (Feet): First Floor..... Other Floors..... Basement..... Load Capacity (Lbs/Sq.Ft.): First Floor..... Other Floors..... Basement.....	 Brick walls, concrete floors. One. 20 - - Unlimited. - -	 Steel frame, concrete walls and floors. Six and basement. 10 10 10 300 300 300
AREAS FOR PUBLIC STORAGE:	DRY STORAGE / COLD STORAGE	DRY STORAGE / COLD STORAGE
General Storage.....(Sq.Ft.)	56,000 / -	10,000 / -
U.S. Customs Bonded...(Sq.Ft.)	- / -	- / -
Cooler Space.....(Cu.Ft.)	- / -	- / 1,320,654
Freezer Space.....(Cu.Ft.)	- / -	- / 1,424,430
Convertible Space.....(Cu.Ft.)	- / -	- / (Partially).
RAILWAY CONNECTIONS	One platform-level track with 16 loading stations connects with Norfolk and Western Railway.	Two carfloor-level tracks with a total of 10 loading stations connect with Norfolk and Western Railway.
TRUCKLOADING STATIONS	2 at platform.	15 at platform.
HANDLING EQUIPMENT	Forklift trucks, one 2 1/2-ton, overhead bridge crane.	Ten 2-2 1/2-ton electric forklift trucks and four 2 1/2-ton elevators.
FIRE PROTECTION	Automatic detection and sprinkler systems.	Automatic detection system; 24-hour guards.
REMARKS	-	Direct expansion ammonia refrigeration system, 0-20°F in freezers and 28-40°F in cooler; quick freezing.

STORAGE WAREHOUSES

WAREHOUSE REF. NO.	3	4
OPERATOR AND ADDRESS	Roy's Distribution Services, Inc. 6540 Juniata Avenue Cleveland, OH 44103	Itel Distribution Systems, Inc. 2323 Lakeside Avenue Cleveland, OH 44144
LOCATION	Same as above.	Same as above.
KIND OF STORAGE	Dry.	Dry.
COMMODITIES USUALLY STORED	General merchandise.	General merchandise.
DESCRIPTION Type of Construction Number of Floors Clear Height for Storage (Feet): First Floor..... Other Floors..... Basement..... Load Capacity (Lbs/Sq.Ft.): First Floor..... Other Floors..... Basement.....	Brick walls, concrete floors. Three and basement. 15 12-14 10 - - -	Two buildings: concrete frame, brick and concrete walls, concrete floor. Six and basement. 18 14 18 400 350 1,000
AREAS FOR PUBLIC STORAGE:	DRY STORAGE / COLD STORAGE	DRY STORAGE / COLD STORAGE
General Storage.....(Sq.Ft.)	100,000 / -	550,000 / -
U.S. Customs Bonded...(Sq.Ft.)	- / -	- / -
Cooler Space.....(Cu.Ft.)	- / -	- / -
Freezer Space.....(Cu.Ft.)	- / -	- / -
Convertible Space.....(Cu.Ft.)	- / -	- / -
RAILWAY CONNECTIONS	One platform-level track with 8 loading stations connects with Consolidated Rail Corp.	One covered platform-level track with 5 loading stations connects with Consolidated Rail Corp.
TRUCKLOADING STATIONS	8 doors.	30 doors.
HANDLING EQUIPMENT	Two 2 1/2-ton and one 3-ton LP gas forklift trucks and one elevator.	Eighty 1 1/2- to 5-ton forklift trucks and eight 3-ton elevators.
FIRE PROTECTION	Security guard; automatic detection system.	Automatic detection and dry sprinkler systems.
REMARKS	-	Roll paper handling; pool distribution; freight consolidation; 1,200,000 general storage in northeast Ohio.

STORAGE WAREHOUSES

WAREHOUSE REF. NO.	5	6
OPERATOR AND ADDRESS	Cleveland Express Trucking Co. 550 Harvard Avenue Cleveland, OH 44105	National Commercial Warehousing Corp. 246 E. 131st Street Cleveland, OH 44108
LOCATION	Same as above.	Same as above.
KIND OF STORAGE	Dry.	Dry.
COMMODITIES USUALLY STORED	General merchandise, paper products, furniture.	General merchandise, chemicals, appliances, and furniture.
DESCRIPTION		
Type of Construction	Brick walls, concrete floors.	Brick walls, concrete floors.
Number of Floors	One.	Two.
Clear Height for Storage (Feet):		
First Floor	20	15
Other Floors	-	20
Load Capacity (Lbs/Sq.Ft.):		
First Floor	-	500
Other Floors	-	250

AREAS FOR PUBLIC STORAGE:	DRY STORAGE	COLD STORAGE	DRY STORAGE	COLD STORAGE
General Storage (Sq.Ft.)	20,000	-	130,000	-
U.S. Customs Bonded (Sq.Ft.)	-	-	-	-
Cooler Space (Cu.Ft.)	-	-	-	-
Freezer Space (Cu.Ft.)	-	-	-	-
Convertible Space (Cu.Ft.)	-	-	-	-

RAILWAY CONNECTIONS	One carfloor-level track with 5 loading stations connect with Norfolk and Western Railway.	One platform-level track with 2 loading stations connects with Consolidated Rail Corp.
TRUCKLOADING STATIONS	20	5 dock doors.
HANDLING EQUIPMENT	One 3- and two 2-ton, gasoline, forklift trucks; one 2-ton pallet truck.	One elevator and 4 LP-gas lift trucks.
FIRE PROTECTION	Hand extinguishers.	Automatic alarm; dry sprinkler system.
REMARKS	Drayage and pool distribution services.	-

STORAGE WAREHOUSES

WAREHOUSE REF. NO.	7	8
OPERATOR AND ADDRESS	National Terminals Corp. 6531 Cochran Road Solon, OH 44139	Rockside Distribution Center Co. 16625 Granite Road Maple Heights, OH 44137
LOCATION	Same as above.	Same as above.
KIND OF STORAGE	Cold.	Dry, cold, and cooler.
COMMODITIES USUALLY STORED	Perishable food commodities.	General merchandise, groceries.
DESCRIPTION Type of Construction Number of Floors Clear Height for Storage (Feet): First Floor..... Other Floors..... Load Capacity (Lbs/Sq.Ft.): First Floor..... Other Floors.....	Steel and concrete frame, metal-covered; concrete floors. One. 20 - Unlimited. -	Concrete frame, walls, and floor. One. 19 - Unlimited. -
AREAS FOR PUBLIC STORAGE:	DRY STORAGE / COLD STORAGE	DRY STORAGE / COLD STORAGE
General Storage.....(Sq.Ft.)	- / -	264,000 / -
U.S. Customs Bonded...(Sq.Ft.)	- / -	- / -
Cooler Space.....(Cu.Ft.)	- / -	- / 280,000
Freezer Space.....(Cu.Ft.)	- / 3,811,500	- / 277,000
Convertible Space.....(Cu.Ft.)	- / -	- / -
RAILWAY CONNECTIONS	One carfloor-level track with 5 loading stations connects with Norfolk and Western Railway.	Two platform-level tracks inside building with a total of 16 loading stations connect with Consolidated Rail Corp.
TRUCKLOADING STATIONS	24 at platform.	92 doors.
HANDLING EQUIPMENT	30 electric forklift trucks.	28 forklift trucks.
FIRE PROTECTION	Automatic detection and sprinkler systems.	Sprinkler system.
REMARKS	Direct expansion ammonia refrigeration system temperature range -5°F to +35°F.	Freon refrigeration system temperature range - 38°F in cooler and 0°F - 15°F in freezer.

STORAGE WAREHOUSES

WAREHOUSE REF. NO.	9	10
OPERATOR AND ADDRESS	Lederer Terminals, Inc. 16645 Granite Road Maple Heights, OH 44137	City Industrial, Inc. 4020 E. 116th Street Cleveland, OH 44105
LOCATION	Same as above.	Same as above.
KIND OF STORAGE	Dry and cooler.	Dry.
COMMODITIES USUALLY STORED	General merchandise, groceries.	General merchandise, office and industrial equipment and supplies.
DESCRIPTION Type of Construction Number of Floors Clear Height for Storage (Feet): First Floor..... Other Floors..... Basement..... Load Capacity (Lbs/Sq.Ft.): First Floor..... Other Floors..... Basement.....	Steel frame, brick and concrete walls, concrete floor. One. 24-30 - - Unlimited. - -	Concrete frame, concrete block and brick walls, concrete and wood floors. Three and basement. 13 13 12 - - -
AREAS FOR PUBLIC STORAGE: General Storage.....(Sq.Ft.) U.S. Customs Bonded...(Sq.Ft.) Cooler Space.....(Cu.Ft.) Freezer Space.....(Cu.Ft.) Convertible Space.....(Cu.Ft.)	DRY STORAGE / COLD STORAGE 172,000 / - - / - - / 3,000 - / - - / -	DRY STORAGE / COLD STORAGE 136,000 / - - / - - / - - / - - / -
RAILWAY CONNECTIONS	One carfloor-level track with 16 loading stations connects with Norfolk and Western Railway and Consolidated Rail Corp.	None.
TRUCKLOADING STATIONS	45 at platform.	8 doors and access to interior.
HANDLING EQUIPMENT	Sixty-five 2-ton, electric, forklift trucks with alternate attachments available.	One elevator; 4 overhead cranes; 10 forklift trucks.
FIRE PROTECTION	Automatic detection and sprinkler systems.	Automatic alarm and sprinkler systems.
REMARKS	Freon refrigeration system; cooler temperature maintained at 40°F; air conditioned space at 65°F is available.	-

STORAGE WAREHOUSES

WAREHOUSE REF. NO.	11	12
OPERATOR AND ADDRESS	Norris Brothers, Inc. 2138 Davenport Avenue Cleveland, OH 44114	Interstate Terminal Warehouse, Inc. 15411 Chatfield Avenue Cleveland, OH 44111
LOCATION	2160 W. 106th Street	Same as above.
KIND OF STORAGE	Dry.	Dry.
COMMODITIES USUALLY STORED	General merchandise, machinery, industrial equipment and supplies.	Heavy steel, industrial supplies.
DESCRIPTION Type of Construction Number of Floors Clear Height for Storage (Feet): First Floor..... Other Floors..... Load Capacity (Lbs/Sq.Ft.): First Floor..... Other Floors.....	Steel frame, concrete block and brick walls, concrete floor. One. To 40 - Unlimited. -	Steel frame, concrete block, and metal-covered walls; concrete floor. One. 23 - 10,000 -
AREAS FOR PUBLIC STORAGE:	DRY STORAGE / COLD STORAGE	DRY STORAGE / COLD STORAGE
General Storage.....(Sq.Ft.)	100,000 / -	70,000 / -
U.S. Customs Bonded...(Sq.Ft.)	- / -	- / -
Cooler Space.....(Cu.Ft.)	- / -	- / -
Freezer Space.....(Cu.Ft.)	- / -	- / -
Convertible Space.....(Cu.Ft.)	- / -	- / -
RAILWAY CONNECTIONS	One surface track inside building connects with Consolidated Rail Corp.	One surface track inside building connects with Consolidated Rail Corp.
TRUCKLOADING STATIONS	10 doors and access to interior.	Access to inside of building.
HANDLING EQUIPMENT	Four 10- to 50-ton overhead bridge cranes; ten 2- to 15-ton forklift trucks.	Two 30-ton, overhead, bridge cranes; two 100-foot clear span cranes; one 10-, one 8-, and one 5-ton, gasoline and one 2-ton, LP-gas forklift trucks.
FIRE PROTECTION	Sprinkler system.	Hand extinguishers, hydrants, and hose.
REMARKS	-	-

STORAGE WAREHOUSES

WAREHOUSE REF. NO.	13	14
OPERATOR AND ADDRESS	Bridgeton Refrigerated Warehoue d.b.a. Gateway Refrigeration Co. 2700 East 40th Street Cleveland, OH 44115	Amware Distribution Warehouses 19000 Holland Road Brook Park, OH 44142
LOCATION	Same as above	Same as above.
KIND OF STORAGE	Dry, cold, and cooler.	Dry and cooler.
COMMODITIES USUALLY STORED	Perishable food commodities.	General merchandise, industrial supplies.
DESCRIPTION Type of Construction Number of Floors Clear Height for Storage (Feet): First Floor..... Other Floors..... Load Capacity (Lbs/Sq.Ft.): First Floor..... Other Floors.....	Steel frame, insulated pre-fab panels; concrete floors. One. 14-30 - 300 -	Steel frame, concrete block, and metal-covered walls; concrete floor. One. 22 - Unlimited. -
AREAS FOR PUBLIC STORAGE:	DRY STORAGE / COLD STORAGE	DRY STORAGE / COLD STORAGE
General Storage.....(Sq.Ft.)	20,000 / -	210,000 / -
U.S. Customs Bonded...(Sq.Ft.)	- / -	40,000 / -
Cooler Space.....(Cu.Ft.)	- / 544,370	- / 2,000
Freezer Space.....(Cu.Ft.)	- / 1,360,540	- / -
Other Space.....(Sq.Ft.)	- / -	5,000 (See Remarks.) / -
RAILWAY CONNECTIONS	One carfloor-level track with 2 loading stations connects with Norfolk and Western Railway.	One platform-level track inside building, with 6 loading stations, connects with Consolidated Rail Corp.
TRUCKLOADING STATIONS	32 doors.	13 doors and access to interior.
HANDLING EQUIPMENT	Five electric 1- to 1 1/2-ton forklifts.	Twenty 1 1/4- to 7-ton, forklift trucks.
FIRE PROTECTION	Sprinklers with alarm detection services.	Automatic detection and sprinkler systems.
REMARKS	Ammonia and freon refrigeration systems; distribution services; convertible temperature rooms; hi-rise freezers - 20 dock spaces totally enclosed.	Hazardous merchandise storage space is available as required. Freon refrigeration system with temperature range of 50° to 60°F.

GRAIN ELEVATOR

Cereal Food Processors, Inc. owns and operates a 500,000-bushel elevator at the rear of its wharf (P.W.D. Ref. No. 13) on the right bank of the Cuyahoga River, for the receipt of wheat. This elevator, consisting of 20 concrete silos, is used in connection with the adjacent company-owned flour mill. The wharf provides 350 feet of berthing space with 20- to 23-foot depths of water alongside at low water datum. A marine leg unloads wheat from vessels at a rate of 9,000 bushels per hour; however, the majority of the grain is received from rail cars through an undertrack receiving pit at a rate of 4 cars per 8 hours. Rail tracks serving the elevator and flour mill connect with Consolidated Rail Corp.

HOISTING EQUIPMENT - ASHORE AND AFLOAT

General cargo at the port is usually handled to and from vessels by ships' tackle; however, shore-based hoisting facilities with lifting capacities ranging up to 230 tons and 4 floating cranes with lifting capacities ranging up to 75 tons are available to the public. The following listing gives details of the hoisting equipment available for hire. Cranes, derricks, and special-handling equipment at other waterfront facilities within the port area are for the sole use of the operating companies and are described under "Mechanical Handling Facilities" in the preceding table of Piers, Wharves, and Docks.

Hoisting Equipment - Ashore

Cleveland-Cuyahoga County Port Authority, Stadium Wharf, Berth 28 West (P.W.D. Ref. No. 6)

One electric, stiff-leg derrick mounted on an elevated steel structure, equipped with 85-foot boom mounted on a bull wheel; maximum lift capacity 150 tons at 65-foot radius (outboard reach 41 feet), boom swings 265 degrees.

Cleveland Stevedore Co., Piers Nos. 26 and 24, 103 Erieside Avenue, Cleveland, Ohio 44113 (P.W.D. Ref. Nos. 7 and 8)

One 230-ton, diesel, crawler crane with 120-foot boom; lift capacity 100 tons at 30-, 60 tons at 50-, and 40 tons at 70-foot radius.

Three 150-ton, diesel, crawler cranes, each with 120-foot boom; lift capacities 88 tons at 24-, 23.5 tons at 60-, and 14.5 tons at 85-foot radius.

Two 135-ton, diesel, crawler cranes, each with 120-foot boom; lift capacity 73 tons at 24-, 20 tons at 60-, and 12.5 tons at 85-foot radius.

Cranes are equipped to use electric magnets, slings, and clamshell buckets.

Dunbar & Sullivan Dredging Co., Marine Construction Division, P.O. Box 538 Edgewater Branch, Cleveland, Ohio 44107 (P.W.D. Ref. No. 45)

Crane	Capacity (tons)	Boom Length (feet)
Diesel crawler	100	100
Diesel crawler	50	70
Diesel crawler	20	50
Diesel floating w/jack-up spuds	150	170
Steam Floating		
"Cherokee"	75	125
"Iroquois"	50	135
"No. 4"	40	85
"No. 5"	30	85

MARINE REPAIR PLANTS AND DRYDOCKING EQUIPMENT

The G. & W. Industries, Inc., Ship Repair Division, operates a marine repair plant on the left bank of Cuyahoga River above the Carter Road Bridge. This plant, described on the following page, maintains waterfront facilities (P.W.D. Ref. No. 39) for making above-waterline repairs of any nature to vessels of all sizes. In addition, the company utilizes a number of other wharves in the port area, often on short term basis, for performing extensive repairs to vessels. There are no facilities for drydocking or hauling out large, deep-draft vessels at the port.

The Great Lakes Towing Co., Shipyard Division, operates a marine repair plant and a floating drydock on the right bank of Old River. The plant and drydock are operated for repairing the company's floating equipment; however, occasionally are made available to the public on an emergency basis. The drydock is moored at the company's wharf (P.W.D. Ref. No. 44) and has a lift capacity of 235 tons. It is of steel construction, with an overall length of 86 feet and width of 45 feet; the length on the blocks is 86 feet; and the clear width for vessels is 32 feet. When the dock is submerged, the maximum depth over its 12-inch blocks is 14 feet, and the largest vessel handled had a length of 110 feet and a width of 30 feet.

MARINE REPAIR PLANT

REF. NO. OF NEAREST PIER	39
OPERATOR AND ADDRESS	G. & W. Industries, Inc., Ship Repair Division 1898 Carter Road Cleveland, OH 44113
LOCATION OF PLANT	Left bank of Cuyahoga River, above Carter Road Bridge.
REPAIR SHOPS AND EQUIPMENT	Machine, fabrication, and pipe shops; plate shears; 350-ton brake press; portable air compressors; gas and electric welding equipment; 2 mobile and 2 floating cranes. (See Remarks.)
NATURE OF WORK UNDERTAKEN	Above-waterline repairs of any nature, including hulls, rudders, propellers, electronic equipment, engines, deck machinery, and general repairs to vessels at berth.
LARGEST SHAFTS PRODUCED	Lathe: 36-inch swing by 12-foot bed.
LARGEST CASTINGS PRODUCED	None.
VESSEL CAPACITY AT PLANT	Two at wharf; 5 to 8 at other wharves in port.
REMARKS	Company operates 2 work boats equipped with air compressors and welding units and performs work at any location on waterfront between Conneaut and Huron, Ohio.

FLOATING EQUIPMENT

The Great Lakes Towing Company (P.W.D. Ref. No. 44) maintains two towboats ranging from 1,200- to 1,600-horsepower at the Port of Cleveland for towing, docking, undocking, and shifting vessels.

Additional information on floating equipment can be obtained from "Waterborne Transportation Lines of the United States" published by the United States Army Corps of Engineers. This report describes the American flag vessels engaged in the carriage of freight and passengers, listing the net registered tonnage, length, width, draft, horsepower, carrying capacity, and other details of construction. It also describes the operations of each vessel operator, listing the waterways used and the localities served. Copies of this publication are for sale by the District Engineer, U. S. Army Engineer District, New Orleans, ATTN: CELMN-ED-S, P. 0. Box 60267, New Orleans, LA 70160. Mail orders should include check or money order for $7.00 made payable to Finance and Accounting Office, USAED, New Orleans.

RAIL LINES

Cleveland, Ohio, is served by three trunkline railroads: CSX Transportation, Inc., Norfolk and Western Railway, and Consolidated Rail Corporation; and by two industrial railroads: Cuyahoga Valley Railway and River Terminal Railway. The industrial railroads perform most of the switching for the steel mill and other heavy industries in the port area.

NAME OF OPERATOR AND FACILITY	P.W.D. REF. NO.	PAGE NO.
CERES Terminal Co., Inc.		
*Cleveland-Cuahoga County Port Authority,		
Berth 32 East	4	19
C-I-L Chemicals, Inc. Wharf	29	27
Cereal Food Processors, Inc.		
Dock	13	22
Cleveland, City of		
**Columbus Road Dock	15	22
East 9th Street Municipal Pier	3	18
Department of Public Safety, Fire Department, Eagle Avenue Fireboat Wharf	38	30
*G & W Industries, Inc., Collision Bend Mooring Dock	16	23
Cleveland Builders Supply Co.		
Dock No. 1	31	28
Dock No. 2	19	24
Dock No. 4	37	30
"F" Mill Dock	36	29
Cleveland-Cuyahoga County Port Authority		
Stadium Wharf		
*Berth 32 East	4	19
Berths 28, 30, and 32 North	5	19
Berth 28 West	6	19
Dock No. 20	9	20
Cleveland Stevedore Co.		
Cleveland-Cuhahoga County Port Authority		
Pier No. 24	8	20
Pier No. 26	7	20
Clifton Concrete & Supply Co.		
Wharf	33	28
Cumberland Farms, Inc.		
**Cleveland Terminal Wharf	32	28
Dunbar & Sullivan Dredging Co.		
Slip	45	32
Fleet Supply, Inc.		
Dock	34	29
G & W Industries, Inc.		
*Collision Bend Mooring Dock	16	23
Ship Repair Division		
Wharf	39	30
Lower Dock	40	31
Great Lakes Dredge and Dock Co.		
Whiskey Island Yard Dock	50	34
Great Lakes Towing Co.,		
Shipyard Division Wharf	44	32
International Salt Co., a part of AKZO America		
Cleveland Mine Wharf	46	33
Koppers Co., Inc.		
**Cleveland Wharf	30	27
LaFarge Cement Corp.,		
Great Lakes Region		
Cleveland Terminal Wharf	42	31
LTV Steel Corp.		
Fuel Oil Dock	25	26
East Side Lower Dock	24	25
East Side Upper Dock	26	26
West Side Lower Dock	28	27
West Side Middle Dock	27	26
Marathon Petroleum Co.		
Cleveland Asphalt Terminal Barge Wharf	21	24
Marine Fueling, division of		
Reiss Oil Terminal Corp.		
**Wharf	22	25
Medusa Cement Co.		
Cleveland Dock	14	22
Mid-Continent Coal & Coke Co.		
Dock	17	23
North Coast Cruises Inc.		
Landing	11	21
Ohio and Western Pennsylvania Dock Co.		
Consolidated Rail Corp.,		
Ore Dock No. 11	51	34
Ontario Stone Corp.		
Dock No. 1	49	34
Dock No. 2	20	24
Dock No. 3	48	33
Dock No. 4	43	32
Pollution Recovery Systems		
*Samsel Rope & Marine Supply Co., Dock No. 1	12	21
River Dock, Inc.		
Dock	18	23
Samsel Rope and Marine Supply Co.		
*Dock No. 1	12	21
Dock No. 2	10	21
Shell Oil Co. Cleveland Wharf	35	29
Stickney, Brian D.		
Sand Products Corp.,		
Dock No. 1	47	33
United States Government		
U. S. Army Corps of Engineers Cleveland Project Office Dock	2	18
U. S. Coast Guard Cleveland Harbor Station Dock	1	18
United Ready Mix, Inc. Dock	41	31
Zaclon, Inc.		
**Plant Dock	23	25

* Various operators.
**Not operated or used.

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LEGEND

- COAL, COKE
- OIL, PETROLEUM PRODUCTS
- GRAIN
- MARINE REPAIR
- CONVENTIONAL GENERAL CARGO
- SAND, STONE, CEMENT, LIMESTONE
- P PASSENGERS
- SALT
- CHEMICALS
- BULK, DRY AND LIQUID
- STEEL, STEEL PRODUCTS, SCRAP METAL
- PAPER PRODUCTS, NEWSPRINT
- ORE
- DRYDOCKING, MARINE RAILWAYS, BOAT LIFT
- CONTAINERIZED, ROLL-ON ROLL-OFF GENERAL CARGO

PORT SERIES REPORT NUMBER 43

PORT FACILITIES AT

CLEVELAND,OHIO

U.S. ARMY CORPS OF ENGINEERS
WATER RESOURCES SUPPORT CENTER
CASEY BUILDING, FORT BELVOIR, VIRGINIA

800 0 800 1600 2400
SCALE IN FEET

FIELD DATA BY: DAVID C. BOHL — FIELD DATA: AUGUST 1986
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John W Vetter
CHIEF, PORT FACILITIES BRANCH

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